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ART. I.—*Remarks on Statistical Medicine, contrasting the result of the empirical with the regular practice of Physic, in Natchez.* By SAMUEL A. CARTWRIGHT, M.D., of Natchez.

I HAVE witnessed two very different eras in the practice of Medicine in Natchez. In the first, the practice was confined to physicians, who had been regularly educated for that purpose, and the doors closed against all species of empiricism. In the second, the practice has not been confined to physicians properly so called, but fully and freely laid open to all kinds of quacks and ignorant pretenders. I am now about to test the results of the practice of medicine in these two eras,

standing as I do as a link between them, by the unquestionable facts of statistical medicine.

Statistical medicine or political arithmetic, as it is sometimes called, is that searching department of our science which separates the ore from the dross. It melts down and consumes the scaffolding which elevates empiricism, ephemeral success and accidental popularity, into high places. It undeceives the public by substituting for the caprices of the credulous, the partial and the prejudiced, the unerring results of time and truth. Statistical medicine furnishes the key which opens to public view in a manner the most convincing, simple and summary the actual results of the regular and empirical practice. The doctrine of annuities, successions, reversions and life assurances, are all founded upon the truths afforded by statistical medicine. The facts, which it discloses in regard to the practice of medicine in this city, are well calculated to make every member of this society proud of the profession to which he belongs and of the noble science to which it pertains. They show that the syren voice of the empiric is not to be trusted. They prove that there is no short road to knowledge in medicine—no safety for the afflicted, but in the counsels of those who have patiently climbed the rugged hill of science—no reform to be found by descending lower, but by climbing higher.

The excitement, which of late years, has been kindled throughout the United States against the medical profession under the popular catch word "*reform*," not only struck at physicians, but at some of the most valuable medicines of the materia medica. The medicines, most commonly used by physicians, particularly all the mineral preparations, were denounced as poisons, and pnysicians were represented as a set of men who followed the avocation of poisoning their fellow

citizens for mere gain, or from a species of infatuation, and so far from being useful to the public were more mischievous than an equal number of assassins or highway robbers. The excitement was fanned into a flame, with so much zeal, by the manufacturers of nostrums and patent medicines, that many ignorant, but in some instances good meaning persons, were stricken with a species of fanaticism, believing themselves called on to go out into the world to bring about a reform in medicine. Cobblers left their lasts, blacksmiths their anvils, the barber threw aside his shaving-brush, and even grey headed tailors jumped down from the board to become reformers in physic. For some time our strict laws against empiricism kept the reformers out of Natchez. At length, from causes not necessary here to mention, our laws against empiricism were virtually annulled. Very soon afterwards no less than half a dozen reformers, full of zeal, made their way into this city and chose it as the place of their permanent residence to carry out a reformation in medicine. They had never studied the science they came to reform, nor had they ever acquired the elementary education necessary to enable them to begin the study. But their lack of knowledge only made them the louder in denouncing physicians and their remedies. They were particularly hostile to calomel and the lancet. The one, they accused of being in all cases a poison, and the other of being at all times unnecessary and pernicious. They excited the hopes of the afflicted and prevailed on the credulity of the weak, by puffing the many miraculous cures, which, the "reformed system" was said to have effected. But in regard to the more numerous tribes of curable diseases, which the reformed system failed to cure, they put the finger of silence upon their lips. All those cases which baffled the best directed efforts of the regular practitioners,

the empirics adduced as witnesses to prove the imperfections and uncertainties of the healing art, thereby endeavoring to shake the confidence of the public in the physicians and their remedies. Many persons who did not become converts to the reformed system, were nevertheless so far influenced by the sophisms, dogmas, and misrepresentations of the empirics, as to lose a large share of their confidence in the regular physicians and failed to make application in due time, for fear of being bled, or having to take calomel or some other drug which the reformers had so repeatedly denounced as poisonous.

I am now about to turn statistical medicine upon the reformers. It is the spear of Ithuriel. The physicians of Natchez in ten years, from the 31st of December, 1823, to the 1st of January, 1834, have lost in all the population, including strangers, 641 patients. In the mean time 337 deaths are recorded not certified by any physician. The whole number of deaths in ten years being 998. This is less than 98 deaths per annum. Estimating the population at an average of 3,000, which falls short, rather than exceeds the true amount, the average mortality in the ten years would be only one in every 30.6-10 per annum. From the facts heretofore contributed to statistical medicine it is known that the average annual mortality of some of the principal cities of the world is much greater than this. According to Dr. Hawkins of the Royal College of physicians, the annual mortality of Naples is 1 in 28; Vienna 1 in 26; Madrid 1 in 29; Rome 1 in 25; Amsterdam 1 in 24. The mortality in all these cities being greater than that of Natchez. According to the same authority the mortality of Paris, Lyons, Strasburg, Barcelona and Nice is from 1 in 31 to 1 in 32, very little less than that of Natchez. In Philadelphia in the year 1832, there were 6699 deaths re-

ported out of a population of 188,397, making the average mortality of that city about 1 in 29.3-10 greater than the average mortality of Natchez. During a period of ten years from 1820 to 1831, the mortality of Philadelphia has varied from 1 in 30.5 to 1 in 42.9. During the same period, the average mortality among fifteen or sixteen thousand negroes in Philadelphia has been 1 in 21.7. According to Dr. Emerson, who has collected much statistical information, Philadelphia is one of the healthiest cities in the United States, and far more healthy than London. Owing to the cupidity of the English government which taxes both the cradle and the grave, the average mortality of Great Britain and the principal cities in it cannot be very correctly ascertained. A large number of births and deaths are not reported, in order to avoid the tax which is levied on all records. The dissenters keep few or no records of births, deaths and marriages. Their records are not received as evidence, consequently the business of registering is monopolized by the parish clerks of the established church. But even with this deficiency, without making any allowance for the unregistered deaths, the average annual mortality of Natchez, during a period of ten years, has been less than the average mortality of London during a period of ten years. The mortality of London from 1790 to 1801 was 1 in 29.3-10. It is somewhat less at present. The average mortality of England and Wales during a period of thirty years, from 1790 to 1821, has varied from 1 in 37 to 1 in 57. In Paris, according to Villerme, the average mortality from the domicil, not including the deaths which occur in the hospitals, (being about one third of the whole,) is one in 58 in those parts of the city inhabited by the wealthy class of citizens, but in the 12th arrondisement which is inhabited by the poorer classes, it is 1 in 24.8-10. Marobale estimates the

mortality of France during a period of twelve years from 1817 to 1829, varying from 1 in 27.3-5 to 1 in 53.5. But Napoleon contributed some very valuable and correct information to statistical Medicine. He caused the inhabitants of several departments of France to be accurately enumerated. Officers were appointed with ample powers to make a full and fair registry of all the births and deaths, and to guard against errors from ingress and egress. His object was to learn the natural increase and decrease of the population in order to make it serve as a comparison for the rest of his empire. The departments enumerated contained 2,037,615 individuals—203,102 of whom died in three years—making the annual average mortality in that part of France 1 in 30, being a small fraction greater than the annual average mortality of Natchez for ten years. Thus we find ten or a dozen physicians located in a hot and insalubrious climate, a large portion of the population not being natives or inured to the climate, contending with two yellow fevers, an epidemic cholera, measles, whooping-cough, scarlet fever and small pox; yet under all these disadvantages, the average mortality, during a period of ten years in succession, has been *less* than the average mortality of a large part of France in one of the most salubrious climates in the world—*less* than the mortality in that very portion of France, in which Napoleon had the average correctly ascertained in order to make it a standard of comparison for the rest of his empire—*less* than the mortality in Naples, Madrid, Vienna, Rome and Amsterdam—*less* than in London during a period of ten years—*less* than in Philadelphia during the year 1832, and not much greater than the average mortality in any other town, city or country—no greater, not even as great, if due allowance were made for the deaths which occur among the non-resident population.

More than half the deaths in the Natchez bills of mortality occur among strangers who are not enumerated in the census. If these were subtracted the average mortality of the citizens of Natchez during the whole period of ten years would not exceed 1 in 61 per annum; a less degree of mortality for so long a period than any other town or city in the United States can boast of. I have computed the population of Natchez from 1823 to 1834 at an average of 3000—I believe it however to be more. In 1830 when the population had got to its lowest point, and at a season of the year when the town contained the fewest inhabitants, an actual enumeration, by the officers of the United States government, gave 2789 resident citizens. The bills of mortality in 1830 in a population of 2789 make the average mortality for that year only 1 in 34.8-10. Those acquainted with the history of Natchez know that it gradually decreased from 1823 to 1830, when it slowly increased until 1833, and then in less than twelve months nearly doubled its former population. But to make the lowest enumeration the basis of this calculation, the average mortality, during ten years, would be only 1 in 28.5-10, including the whole of the deaths among strangers, including all still born children, and also including the deaths among from five hundred to a thousand negroes annually brought to this city for sale, prior to the total interdiction of the trade by the legislature of Mississippi in 1836. This would give a less mortality than that of Naples, Vienna, Rome, Amsterdam, Edinburg, Dublin, and at least three fourths of London and Paris, and considerably less than that part of Philadelphia inhabited by negroes.

But how happens it, that the average mortality of Natchez, during a period of ten years, has been so small? How happens it, that while in all other places from 1 to 21 to 1 in 53

of the inhabitants have died annually, in Natchez only 1 in 61 of her citizens, for ten years in succession, has perished annually, and only 1 in 30.6 including strangers and boatmen of which she has always had such great numbers? These astonishing results are not owing to any mistake. All the deaths which occur are faithfully registered by the sexton and reported to the city council. The sexton is bound, under a penalty of fifty dollars for every case of omission, to register and report every death. The population is not estimated too high, because in the year 1830 when the census was taken, by comparing the bills of mortality of that year with the exact population returns, the average mortality is found to be considerably less than the computed average for ten years. The people at a distance, hearing of so many epidemics in Natchez, naturally supposed that the mortality must be very great, and that human life was less secure than in almost any other place. But facts of the most indisputable kind prove that Natchez, in ten years, under the most discouraging and disadvantageous circumstances, lost a fewer number of her citizens by death, in proportion to her population, than almost any other town or city in the civilized world. The reason of so gratifying a result is as plain as the noonday sun. Natchez, during the ten years mentioned, *protected and encouraged science, and science protected and guarded her citizens.* The citizens of Natchez, during these ten years, were protected by strict laws against murderous quacks and empiricism of all kinds. The whole population had confidence in the medical profession, and owing to this confidence, *made timely application for medical assistance*, whenever they found themselves afflicted with any malady whatever. Other towns and cities may have had as good physicians, but the influence of empirics, the ignorance of the people, and their want of confidence

in the healing art, besides the great numbers, in Europe, who perish *for the want of bread* and the comforts and necessaries of life, have co-operated to make the healing power and beneficial influences of the medical profession less diffused, felt, and appreciated. But in Natchez, situated in the most favored spot of the most favored land, where plenty and abundance abound, where every inhabitant, bond or free, rich or poor, young or old, has all the solid comforts and necessaries of life at all times at command, the benefits and blessings of the science of medicine were dispersed and diffused throughout her whole population, until the subtle wiles of crafty and designing empirics and pretended reformers, impaired the confidence of the public in the regular medical profession. Leaning with confidence on the arm of science, the citizens of Natchez passed through two yellow fevers, an epidemic cholera, whooping-cough, measles, scarlet fever and small pox, besides the other diseases incident to the climate, and in ten years a fewer number of them perished, in proportion to the population, than in any other town or city from which we have any authentic results. The good effects of confidence in the medical profession, and the benefits to be derived from timely application for medical advice, were clearly demonstrated during the epidemic cholera, which visited this city in May and June of 1833. While in Paris, and many other cities, the ignorant inhabitants, goaded and worked upon by designing empirics, and the venders and fabricators of nostrums, and secret medicines, were accusing the physicians of having poisoned them, consequently refusing and disdaining medical aid and dying by thousands, the good people of Natchez were every where seeking timely medical assistance. The consequence was, that the epidemic, out of the whole population of Natchez in two months, May and June, including strangers, and negroes

brought here for sale, only carried off forty-three individuals. Whereas nearly this number died in a single day in many villages and towns of no greater population, wherever the inhabitants abandoned their physicians and looked to empiricism and to nostrums for safety.

I have thus attempted to show Natchez trusting in and wisely protecting science during the long period of ten years—through all this long lapse of years science being triumphant, amidst circumstances calculated to desolate and depopulate any other city. But it is now my task to review the picture and to exhibit Natchez during a period of four years and nine months—a period, with the exception of three months in 1837, remarkable for its health and entire exemption from epidemic diseases. I will present her to the reader—not leaning upon the arm of science—not confiding exclusively to it—not trusting in it—not protecting it by wise legislation, but letting it go, to follow after ignorant, presuming and fanatical empirics, and seeking safety in the patent nostrums of ignorance and fraud. Before the termination of 1833 the laws of Mississippi, which protected the science of Medicine and guarded the people against ignorant presumers and pretended reformers, were virtually annulled. By the first of January 1834 a host of empirics had made their way into our city, and commenced in good earnest, what they called a reformation in medicine. They first began their operations by using every artifice to destroy the confidence of the public, in the virtue of those remedies and means, which the accumulated experience of ages, has found to be the most effectual in the treatment of a large class of diseases—particularly such as occur in warm climates. They used great and unwearied exertions, not only to prejudice the public against most of the medicines which physicians employed, calling them poisons, but they

endeavored to destroy public confidence in the physicians themselves and to bring contempt and disrepute upon the regular exercise of the medical art. So great was their zeal, they succeeded in weakening public confidence in the medical profession in a greater degree than could have been expected in so intelligent a community. Some good citizens of Natchez and its vicinity they entirely alienated from it. In some instances they even succeeded in turning those, who owed their lives to the scientific practice of medicine, altogether against it. The natural effect of debility and old age were artfully attributed to the influence of calomel and the lancet. Deaths, which no human means could avert, and which must occur while man is mortal, were said to have been occasioned by poisonous drugs. The more numerous cases, which *got sound and well* under the use of the *very same* drugs, were overlooked. Nothing was likewise said of the many remediable cases which proved fatal under the empirical practice—but the welkin was made to ring with every case which got well under it, or which recovered in spite of it.

I now come to apply statistical medicine to that portion of time which has elapsed, since half a dozen or more empirics have located themselves in Natchez to carry out, what they call, "a reform in medicine." In other words, I am now about to test the pretended reformation in medicine by the unerring results of time and truth.

But first I propose to follow up the practice of the regular physicians. A considerable part of the population, generally embracing the more intelligent citizens, were not seduced by the empirics, but continued to employ as formerly, the regular physicians. During the last four years and nine months, omitting the deaths which occurred during the period of the epidemic of 1837, the regular physicians lost 523 patients.

Admitting that the population of Natchez, since the 1st of January 1834, has been double what it was during the ten years preceding 1834, the number of patients which have died under the care of physicians, during a period of four years and six months, would, if the population has actually doubled itself, be 566; provided their practice was neither more nor less successful than the practice of the physicians of the ten years preceding 1834. If the epidemic be excluded, fewer persons have died since the 1st of January 1834, under the treatment of regular physicians, than did previously. But if the epidemic of 1837 be included in the estimate, 84 more persons have died under the regular physicians, in the last four years and nine months, than the proportional number of deaths which occurred in the practice of the physicians who preceded them. Thus, if the physicians, during a period of ten years in a population of 3000, lost 641 patients, how many, in the same ratio, would die in a population of 6000 in four years and nine months? The relative proportion would be 609. But 693 is the number reported. But in the ten years from 1823 to 1834, besides the 641 patients reported by physicians, there are 337 unreported cases, or cases reported by persons not belonging to the profession. These 337 unreported cases were partly composed of strangers brought here in a dying state from New Orleans; partly of accidental deaths; partly of still born children; partly of intemperate and houseless strangers; partly of persons who refused medical advice, and partly of omissions in the attending physicians to report all the deaths which occurred in their practice. If a population of 3000, in ten years, gives 337 unreported cases, how many unreported cases would a population of 6000 give in four years and nine months. The number would be 320. But the actual number of unreported cases of the last four

years and nine months, as proved by the sexton's books, is 622. If 320 be taken from 622 there will remain 302. Therefore, 302 individuals in the last four years and nine months, have either been directly sacrificed on the smoking altars of steam, or had their confidence in the medical profession so much impaired by designing empirics as to forego the advantages of science, and die of remediable diseases. Lest it be supposed that the great excess of unreported cases occurred during the epidemic of 1837, I have consulted the register kept by the sexton, and find that the whole number of unreported deaths, during August, September and October 1837, embracing the whole period of the epidemic, is only 70. By deducting 70 from 302 there remain 232 more unreported deaths in four years and six months (omitting three months for the epidemic,) than occurred during the whole period of the preceding ten years. The total number of deaths, which occurred in ten years, from 1823 to 1834, is 978. If therefore a population of 3000, in ten years, lose 978, how many deaths would occur in a population of 6000 in four years and nine months? The total number should be 929. But the actual number of deaths recorded in the sexton's books, the last four years and nine months, since the pretended reformation in medicine commenced, is 1315. The reformation, therefore, has reformed, in four years and nine months, no less than 386 individuals out of existence. But to put the matter in a plainer light—the average annual mortality of Natchez since empirics have divided the practice with the regular physicians, is no less than one death per annum in every 21.7-10 of the inhabitants: but to estimate the mortality on the actual population of 1837, when Natchez contained its highest population, 6000, it would be, 1 in 22.2; but in the ten years preceding this mixture of empiricism with the regular practice only one in

every 30.6-10 died per annum. During these ten years, the number who died under the care of physicians was about 1 in 47 per annum, and the number of unreported deaths during the same period was 1 in 89 per annum. But during the last four years and nine months, including the late epidemic, and including all the cases from the Natchez hospital, the physicians lost 1 in 41 per annum, whereas the unreported deaths of the same period were 1 in 45.7-10 per annum; nearly double the unreported cases of the former period, and exceeding the whole mortality occurring in the practice of the physicians during ten years. But it may be supposed, that the increased mortality of the last four years and nine months, may be owing in part to the greater number of persons who have settled in Natchez, and who have had to undergo that peculiar change called acclimation. It may also be supposed, that the comparatively small mortality of the ten preceding years might be owing to a greater proportional number of citizens leaving town, during the sickly months in the first period of ten years, than in the second period of four years and nine months. Plausible as these suppositions may be to account for the great difference of mortality during the two periods, a voice from the cemetery proclaims, that such is not the true reason. It is well known, that the fever of acclimation, or the stranger's fever, as it is sometimes called, never occurs in the winter or spring. It is likewise known, that no persons fly from town in order to avoid sickness in January, February and March. But what does the voice from the burial ground say? It says, that the total number of dead bodies conveyed there, during a period of ten years, from 1823 to 1834, in the months of January, February and March, was only 159; and that the number carried thither, the last five years in the same months, January, February and March, is no less

than 239. Half the time and twice the population ought to give the same results, as twice the time and half the population. If, therefore, the introduction of empiricism, and patent medicines into Natchez had added nothing to the mortality of the place, the aggregate number of deaths which occurred during the first quarter of each of the last six years, should not have exceeded the aggregate number of deaths which occurred during the first quarter of each of the ten preceding years. But they do exceed them, as far as 239 exceed 159. The difference, between these two numbers, gives the precise increase of mortality, during the months of January, February and March, since half a dozen or more deluded empirics made this city their place of residence and commenced, what they called, a reformation in medicine. The average annual mortality, taking these months as the standard, during ten years, was only 1 in 47. But no sooner did illiterate mountebanks make a lodgement in Natchez, than the mortality of January, February and March increased to 1 in 31.4-10 per annum. In the month of April, during the ten years between 1833 and 1834, the physicians lost 39 patients, and during the same time 11 deaths were unreported. The whole mortality for ten Aprils in succession was only 50. But since quackery has been let loose upon the people of Natchez, 85 persons have died during the last five Aprils—being 35 more than the proportional number of deaths that occurred before the empirics proffered their services to the good people of this city.

In other words, making April the standard, the average mortality would be only 1 in 50 per annum of the total population, including strangers, during a period of ten years. But since Natchez has been overrun by empirics, the mortality of the last five Aprils has increased to 1 in 29. 4-10 per annum.

The mortality which occurred in the practice of the physicians in each month of April for ten years, between 1823 and 1834, has been at the rate of 1 in 64. 2-10. The mortality which has occurred in the practice of the physicians of the last five Aprils has been at the rate of 1 in 65. 7-10—nearly equal as far as the physicians are concerned in both periods. Yet in the first period of ten years only 1 in 50 died, but as soon as quackery was introduced, 1 in 29. 4-10 died. It is worthy of particular remark, that the number of deaths reported by the physicians in both periods, not only in the month of April, but every other month of the year, is relatively very nearly the same. Thus, 39 deaths were reported by physicians in the ten Aprils of the first perod, and 38 in the five Aprils of the second period. But while the unreported deaths of the first period were only 11, the unreported deaths of the second period amount to 47. Again, during the first ten of the last fifteen Mays, Natchez lost in all 73 individuals; 40 reported by physicians and 33 unreported cases. But during the last five Mays, she has lost 99 individuals, 33 reported by physicians and 66 unreported cases, or cases reported by persons who are not regular physicians. During the last period the unreported deaths, or those which have been reported by persons not belonging to the medical profession, double the number of deaths reported by physicians; whereas before the introduction of quackery, a large majority of all the deaths were reported by the physicians. To sum up the matter, therefore—in January, February, March, April and May of the ten years preceding 1834, 293 persons died in Natchez; while in the same months for the last five years, 421 have died. In half the time, and twice the population, the number should have been the same. No less, therefore, than 128 individuals have unnecessarily perished,

or have been wantonly sacrified, since the first of January, 1834, during the five most healthy months in the year. Taking these five healthy months, as being the months best calculated to test the success of the empirical practice, as the months when empiricism is most popular, (diseases being the mildest, and the principle of life the strongest,) 128 individuals have died, over and above the number which did die in twice the time and half the population, before the empirical practice was introduced, and before public confidence was shaken in the medical profession. If these healthy months were made the standard of comparison, Natchez would lose 331 individuals in five years over and above the number she lost, in ten years and half the population, under the regular exercise of the medical profession, unmixed with quackery. The empirics will no doubt try to evade the issue by disowning the unreported cases, or may even lay them to the charge of the physicians. But the main and essential fact, *that the mortality of Natchez has greatly increased since they came to town and commenced a pretended reformation in medicine, will still stand in bold relief against them.* If they could prove that the physicians neglected to report all the deaths which occurred in their practice, the physicians, on their part, could prove that many of the cases they did report, had previously been subjected to steam, or that the sick had eked out the first period of their disease in the use of nostrums and quack medicines. The medical statistics of Natchez prove in the clearest and most undeniable manner, that previously to the introduction of quackery the annual average mortality for ten years in succession, embracing a very sickly period, rife with epidemic diseases, was much less, or at least very little, if any greater, than the average mortality of most other towns and cities in the world which are reputed healthy. But since the intro-

duction of quackery, the annual average mortality has greatly increased. To charge the increased mortality to the present regular physicians would avail empiricism nothing, unless it could blot out from the records of the city the diminished mortality under the regular physicians, before it was permitted to obtrude itself among them. The present physicians, and those of a former day drank at the same well of science. When the empirics came to Natchez the annual average mortality, including strangers, still-born children, and the deaths occurring among the negroes brought here for sale, was only 1 in 30. 6—and had been at this rate for the ten preceding years, while the mortality among the citizens proper did not exceed 1 in 61; but the very month in which the empirics commenced, in good earnest, to reform a science they had never studied, the mortality suddenly increased to one death in every 21 inhabitants per annum, notwithstanding that Natchez had, in the mean time, ceased to be a market for the sale of negroes, which formerly added very considerably to the bills of mortality, not only from the deaths which occurred among them, but likewise from the contagious diseases, as measles and whooping cough, which they almost annually introduced into the city.

The important fact, that the mortality of Natchez has greatly increased since the introduction of quackery, cannot be evaded by saying, that I have rated the population too high at one period and too low at another. The population in 1830 was known to be 2789. The number of deaths which occurred in that year is likewise known to be 80—which would make the average for that year only 1 in 34. 8-10. The population in 1837 amounted to 6160. The number of deaths which occurred in nine months of that year, omitting entirely the deaths which occurred during the period of

the epidemic in August, September and October, amounts to 186—this would give an average mortality of 1 in 24. 4-10 per annum. But if the population since the empirics have been permitted to practise medicine in Natchez, be put at the highest enumeration, and at the lowest enumeration previously to their introduction, still would it be found that the mortality of the city, since the introduction of quackery, has increased in a manner sufficient to demonstrate that the city has gained nothing by the pretended reformation in medicine, but has lost much. I do not say, nor do I believe, that the empirics have actually carried a sufficient number of patients through a full course of steam and No. 6, to account for the great increase of mortality; but I do say, and believe, that the war they have waged against the known and well-tried remedies of the Materia Medica, and the measures they have taken to destroy public confidence in the medical profession, are nearly sufficient of themselves to account for the increased mortality, without taking into the estimate those who died under their scalding treatment.

I owe to the empirics, *en masse*, a public exposition of my opinions in regard to the "reformed system," for having wantonly and wilfully spread, far and wide, a report which was most industriously circulated, that I had, in a good degree, become a convert to their doctrines. This, like many other reports, I viewed as a trick in their trade of deceiving the public. It is true I have used red pepper and lobelia in my practice, but I have used these articles of the Materia Medica in my practice before I ever heard of steam doctors or botanical reformers. If the fanatic Thompson had taken a fancy to calomel and the lancet, instead of red pepper and lobelia, I should not have thrown aside calomel and the

lancet for fear of being classed among his disciples by employing the remedies which he and they abused.

The empiric is known by his nostrums and secret combinations, and by his ignorant and indiscriminate use and application of the known and established articles of the Materia Medica. It is not the medicine, but the man, who ignorantly uses the medicine, which constitutes empiricism. No one medicine can be proper in all cases of disease. The empiric treats all cases, however different, very nearly alike, with the same articles, whether vegetable or mineral substances, whether calomel or red pepper and lobelia; but the physician draws his remedial agents from the animal, vegetable and mineral kingdoms, he knows, or should know, the properties and virtues of all; consequently in the treatment of the various diseases, he makes such selections of medicinal agents, for every individual case, as the lights of science, conjoined with his own and the experience of former ages and other countries, may, in his judgment, after a careful examination of the case, seem to be the most appropriate.

In the collection and publication of the medical statistics of this city, my first object was to bring about some action, at home, which might prevent any further and unnecessary sacrifice of human life among my neighbors and fellow-citizens. But I have supposed, that a full and free inquiry in regard to this important matter by the profession in other quarters, might be attended with happy results, and I trust that my essay will be followed by other expositions on the same subject, which will at length open the eyes of the community to the extent and enormity of this evil. It may not be in the power of the profession to induce legislatures to enact laws for the suppression of empiricism; but it is their duty to inform the public as to the evils of quackery. These statis-

tics, it is not in the power of empirics, or of those who countenance them, to gainsay or resist; and if they be extended by physicians in other places where the "*reforming system*" has been in operation, a mass of testimony will be collected which, in the end, must exercise a controlling influence upon public sentiment. It is by the exhibition of such facts as have been presented in this paper, that the judgments of men are to be convinced.

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ART. II.—*Practical Observations on the use of Sulphate of Quinine.* By JOHN W. MONETTE, M.D., of Washington, Mississippi.

IN the 13th volume of the "American Journal of Medical Sciences," I gave my views of the medical properties of the sulphate of quinine, as a remedy in febrile affections, and of the proper cases for its use in the treatment of fevers of the remittent and intermittent type. In the article referred to, it is contended that the sulphate of quinine is a powerful *febrifuge* in fevers with increased action and tone, and acts somewhat analogously to antimony and other contra-stimulants; that it is by no means a direct stimulant to the circulation or nervous and cerebral energy; but is calculated to reduce the tone of both: that it is not by any means a tonic in the general acceptation of the term: that it is not adapted to the treatment of fevers attended with direct debility: nor to cases of debility without fever; and that it will produce pernicious effects in such cases if administered freely.

I propose in the present article to offer a few additional remarks in illustration of my views of the therapeutic proper-

ties of quinine. In this I shall cite a few cases and base my remarks upon them with the sole design of illustrating the views which I entertain. I am convinced, that much temporary inconvenience if not injury is often caused to patients, laboring under autumnal fevers and other febrile affections, by an injudicious administration of quinine; and that this injudicious administration proceeds from a mistaken idea of its precise medical properties: especially from the belief that it is purely tonic or stimulant. Neither of these properties pertains to the sulphate of quinine, unless it be indirectly, by reducing the febrile action and diathesis. In febrile affections attended with an irritable condition of the nervous system, and exhausted vigour of animal action, quinine will be decidedly prejudicial. In these cases it increases the nervous irritability, impairs cerebral energy, and produces great precordial distress. I know several persons of nervous temperament who suffer so much from a single dose of quinine, that no persuasion would induce them to repeat it: one gentleman in particular is thrown into a perfect delirium by a full dose of quinine, even in the state of fever, and much more so in the absence of fever. Two cases came under my observation last summer in which death was caused in a few hours by only two doses of quinine. The patients were two black children, one five, and the other six months old. They were taken with a catarrhal bilious fever about the 10th of September, when it prevailed epidemically in this vicinity among the infants and children. These two infants had been sick four or five days, had taken eight or ten small doses of calomel, which had excited and kept up copious yellow and green mucous discharges from the bowels; and the general nervous and cerebral irritation was augmented, and the febrile action reduced to the irritable kind. At this stage I saw them; pre-

scribed mild demulcents, gentle anodynes, fomentations to the abdomen, and gentle saline laxatives after the irritable condition of the bowels was allayed. On the third day after I saw them, they were clear of fever and apparently in a fine condition for convalescence. In this condition, with a view of preventing fever, each of them took one grain of quinine and half a grain of Dover's powder at 2 o'clock, and repeated it at 5 o'clock. Soon after the first dose, the fever appeared to rise, the pulse became active and throbbing; the head hot, and pulsating, with general uneasiness. All these symptoms increased soon after the second dose; and became greatly aggravated about 7 o'clock, attended with partial spasms. One died at 9 o'clock, and the other in half an hour afterwards.

*Remarks.*—At the time the first dose of quinine was given, these children were in a fine state for convalescence without any medicine, and would in all probability have rapidly recovered under the occasional exhibition of a very small portion of weak brandy toddy, with a few drops of paregoric, or essence of peppermint in it; and with an occasional mild laxative. The quinine in very small quantities, one-eighth to one-fourth of a grain, might have been beneficial: but the condition of the little patients was not such as to bear a full dose. Adults in our country are sometimes, during convalescence from bilious fevers, in precisely analogous circumstances, especially females; and in them quinine administered in the same proportion would be almost as detrimental. But in them a consciousness of its pernicious effects would cause them to refuse its further administration. In such cases, if the tone of the system were not impaired, and if the nervous temperament did not predominate, the use of quinine combined with some aromatic would be applicable: but otherwise the infu-

sion of cinchona and ginger, or weak toddy is decidedly preferable.

The above is evidently the experience of M. Vulpes, of Naples, when he describes the sulphate of quinine as "more irritating than the cinchona." Yet Dr. Eberle, (Practice, vol. 1, p. 73,) in commenting upon the experience of M. Vulpes, says, he has never perceived such difference in the action of the two articles. Yet Dr. Eberle (Ibid, p. 76,) admits that he has seen pernicious effects from large doses in the cold stage of intermittents; and, that he suspects that certain cerebral irritations in a lady of delicate constitution, and in a lad, were attributable to its improper use. These effects I am confident will not be produced in the robust and the athletic, whether they have fever or not. Dr. Eberle however thinks quinine a good substitute for barks, and much more convenient when bark is rejected by the stomach. On this point I remark, that quinine will disagree with the nervous system as often as the bark does with the stomach; but the cases in which quinine generally disagrees, are those of persons of nervous temperament, and irritable condition of the nervous system.

Very little testimony of any kind in relation to quinine is to be obtained from Dr. Eberle's Practice of Medicine; and it is somewhat surprising that he does not recommend quinine as a remedy in fevers, either continued, remittent, typhus, or bilious. He recommends it principally in intermittents, and even in those cases, he appears to be without any definite views as to its specific action, other than as a tonic or substitute for bark. Throughout the whole work he confounds the two articles, cinchona and sulphate of quinine, as possessing the same properties, and applicable in the same cases. There is no man whose authority in medicine I respect

more than that of Dr. Eberle, in matters pertaining to therapeutic practice: but in regard to the use of quinine I am satisfied he has not made such use of it as would enable him to speak of it in clear and definite terms.

To illustrate my views of the pernicious effects of quinine in persons of delicate constitution, nervous temperament, and debilitated condition, I will give the following case, which came under my observation in the spring of 1837.

Case.—Mrs. L. F. æt. 28 or 30 years, of temperament lymphatic and nervous, strongly marked. During the latter months of gestation with her third child, she became greatly afflicted with deranged functions in all the organs of assimilation; such as were indicated by pyrosis, cardialgia, anorexia, and even bulimia, alternately, and an inability to retain anything on her stomach. These symptoms became so aggravated towards the termination of gestation, that for six weeks previous to her accouchement, she was confined to her bed and room. Various antacids, carminatives and such like remedies were used without relief; venesection was used freely several times, and, to say the least of it, without benefit. She became weak, pale, and emaciated, although with a kind of œdematous fulness of features. In this state the pulse became weak, quick, and irritable; the brain became irritable and very sensible to the slightest degree of light and sound. In this state she was delivered of a fine healthy son. She passed through the stage of labor without any untoward circumstance, but her condition became daily more precarious and distressing. I first saw her on the eighth day after her accouchement, in the following condition: viz.—The lochiæ were profuse and watery; there was a profuse secretion and frequent discharge of thin yellow bile; the pulse weak, quick and irritable; the stomach frequently rejected all ingesta;

the senses of sight and hearing were so acutely sensitive that the room was kept perfectly dark, and the lightest walking in the stocking feet over a carpeted floor gave her great pain, as did also the most moderate whispers in the opposite side of a large room. During the last eight days she had been under the constant attendance of two physicians, and had used freely of magnesia, blue mass, calomel to free ptylism, besides bloodletting twice before the mercurials. Sulphate of quinine was also alternated, with occasionally a small portion of morphia. Nevertheless, all the distressing symptoms had become daily more alarming; and when I first saw her she was unable to raise her head from the pillow; the tongue and face as pale as marble. The last medicines which she had taken were small doses of quinine and blue pill, to the exclusion of the small portions of morphia which she had been taking previously.

In this state I advised the discontinuance of the blue pill and quinine, and to substitute aromatic stimulants and morphia in small quantities; but to satisfy the physician in previous attendance I consented to continue the quinine in doses of 1 gr. every six hours, besides other remedies. Having remained three days and nights without intermission, I had the best opportunities for observing the effects of every article given. About one hour after each portion of the quinine was taken, although in so small a quantity, the nervous irritation became aggravated. The portion of quinine was occasionally omitted to see whether the accompanying change would take place; but the aggravated state of nervous sensibility and irritation did not occur without the quinine, and it was finally dispensed with entirely. Having, in cases somewhat similar, obtained good effects from the oxide of bismuth, I determined to give it a trial in this case. I accordingly gave a powder

composed of 3 grs. ox. bism., ¼ gr. ipecac and 1-6 gr. morphia every three hours until the cerberal and general irritation was in a measure composed, and afterwards *pro. re nata.* The result for several days was such as gave the most flattering prospect; although about ten days afterwards a change occurred in her disease, and she died in my absence.

*Remarks*—I have given this as a minute detail of a most aggravated case of that kind of disordered action, in which quinine is decidedly pernicious. From my observations in this and other cases, I am convinced that had this patient taken 3 grs. of quinine every three hours, instead of 1 gr. every six hours, it would have terminated her existence in a few hours.

Dr. Cartwright seems to have used quinine as a direct febrifuge in 1823-'4-'5, although that was the experimental period of quinine, when it was generally considered only as a tonic. In his essays, published in the Medical Recorder,* he appears to have used it as a febrifuge, to sustain febrile action, and to develope suppressed excitement, especially in pneumonia biliosa. However, in some cases it appears to have had a pernicious effect throughout its administration. Mr. Dearborne's case is one of these. See Medical Recorder, vol. x. pp. 48 and 49, &c.

The direct effects of quinine in improper cases, is to produce a collapse of cerebral and nervous energy—a want of nervous concentration, if the expression may be allowed, a diminution of voluntary action, both mental and corporeal; a confused state of intellect, attended with *tinnitus aurium*, giddiness, vertigo, pain in the head; a feeble, quick or irritable pulse, cerebral irritation, and nervous tremors in the mus-

* Volume X.

cular system. Whether these effects be produced by cerebral congestion, or by a direct diminution of cerebral energy, is of no importance to enquire. The fact is all that is necessary to be known in regulating its administration.

*Congestive fevers* appear to result from a collapse of nervous energy, an overwhelming of the whole recuperative powers of the system, whence all efforts to establish excitement and reaction by the powers of animal life unassisted, fail, and the fatal collapse ensues. This powerful impression results from the greater force of the morbific agent, or from the coincidence of a greater number of auxiliary circumstances attending the condition of the individual attacked, or from the greater degree of susceptibility of the system to the morbific influences, and the less vigorous recuperative powers of constitution in the individual attacked. In strong athletic constitutions, with strong powers of reaction, the excitement becomes open and general; and when no organ is implicated by previous disease there will be very little if any local determinations. In these constitutions if there be partial oppression of circulation, quinine alone or combined may be useful: but in the former it is injurious. In the former, the tone, or the recuperative powers of the system are only oppressed, not directly reduced; hence it is in such cases generally, that we find quinine has been used with benefit in the early stages of fevers, before local determinations and engorgements were established, or the functional action of any organ had become permanently deranged. In these cases, we conceive the poisonous ferment in the system to be neutralized to a certain extent, before the establishment of those functional and structural derangements, which, until removed, in a great degree, preclude the use of quinine.

Thus in cases of great gastro-intestinal irritation, indicated

by a clean, dry, smooth tongue; or a tongue dry, red, and chapped, or dry, brown, and rough, the quinine is useless if not injurious; because the existing intestinal irritation is sufficient to keep up a low grade of fever, even were the original exciting causes withdrawn: and the irritated mucous surfaces, in contact with the quinine, would be further irritated by that medicine, whereby the general sum of the morbid symptoms would be aggravated. This grade of gastro-intestinal irritation scarcely ever presents in the first stages of any fever, but supervenes in continued febrile action, where the mucous membrane receives additional irritation from the repeated irritating effects of purgatives, or other acrid remedies. In these cases quinine unquestionably accelerates that stage called low typhoid fever, accompanied by cerebral irritation and incoherent delirium.

The proximate cause of fever appears to be some essential morbific action or ferment in the circulation, and is modified in its action and operation upon the system by the circumstances of climate, locality, temperament, habits, and other extrinsic circumstances. Other contingent circumstances often cause the particular location of the disease upon particular organs or tissues. The peculiar grade of action in each of these organs and tissues is often modified, in like manner, by circumstances which elude our observation. In a sound constitution, where no organ is more disposed to yield than others, the action is confined to the general circulation and secretory organs, and developes itself in what is termed idiopathic fever. Yet in this grade of fever, a depravation of fluids and secretions often supervenes; and these secretions again operate as new exciting causes of fever, or new sources of morbid irritation.

Although *quinine* is a strong febrifuge—an antidote to this

morbific *virus*, yet its action is confined to the subduing of that morbid action, while there is no local source of irritation. It will not remove morbid and acrid secretions that proceed from morbid action, and serve as a new source of irritation. It will not remove inflammation, which may have resulted from general excitement and the predisposition of a weak organ, in any of the great cavities. It will not remove morbid sensibility and irritability which has supervened in any organ or tissue, from the irritation of morbid secretions, or from local determinations. It will not reduce general febrile action proceeding from the primary morbific agent or miasm, while at the same time all these new sources of febrile irritation are in full operation. Hence, in using sulphate of quinine in fevers, it becomes necessary to reduce, in some degree, the violence of arterial action by the different modes of depletion and narcotics; to remove the irritating secretions from the alimentary canal, and allay with narcotics the irritation already excited. It is necessary to relieve the determination to any particular organ, by antiphlogistic remedies and counter-irritants. It is necessary to develope the circulation and produce open excitement, where it is oppressed and attended with local congestions. It is necessary to allay by opiates and anodynes, functional excitement or irritation, which may be superinduced in the train of febrile symptoms; such as profuse secretion of bile, or profuse serous secretion from the mucous surfaces of the intestinal canal. In short it is necessary to place the system in a state of simple idiopathic fever, as nearly as possible, before the free administration of *quinine* will be beneficial. Upon this principle we see why this medicine may be given without producing any beneficial results, even where it does not produce positive injury.

Upon this principle we insist that the sulphate of quinine

is not a tonic strictly speaking; although it may apparently fulfil the office of a tonic in certain cases, where a slow febrile action is the principal cause and source of the debility. In such cases quinine will appear to act as a tonic; while its real action is to reduce the febrile action concealed in the system, and permit the recuperative powers of the system to restore the natural action in all the functions deranged.

Dr. Perrine, from Campeachy, in a letter to Dr. Drake, published in the Western Medical Journal, appears to entertain the same views of the febrifuge properties of quinine, that we do. In relation to the opposition shown to large doses of this medicine, he says, neither will they "believe that ten grains of quinine will reduce an elevated pulse, and moisten a dry skin, while one grain-doses will irritate both: neither can they believe that quinine can be used like calomel in fevers, in connexion with bleeding and other antiphlogistic remedies." (See number for January, 1834, p. 330.) As to his views in relation to the "irritation of large doses," as well as his views in regard to the use of quinine in the malignant cholera, I am compelled to differ in some respects. Yet he appears to have ascertained, that the properties of sulphate of quinine are essentially febrifuge—and adapted to the treatment of fevers of open excitement.

*December*, 1839.

ART. 111.—*Report of a case in which a Testis was found in the Abdomen of a man post mortem.* By GEORGE W. BAYLESS, M. D.

IN making an autopsical examination, at the Louisville Marine Hospital, May 23d, 1840, of the body of Dunham, a boatman, aged 27 years, large and muscular, we found in the left iliac region, about an in inch and a half from the internal abdominal ring, a testis, about one inch in length, three-fourth's of an inch in breadth, and half an inch thick. From an inspection of its exterior, its organization seems to be perfect. We made no dissection, being desirous of preserving it entire *in situ.* It has a complete peritoneal investment, and is attached by a peduncle of this membrane to the walls of the abdomen, obliquely upwards and backwards from the ring. It hangs loosely in the cavity of the abdomen, and seems to have been arrested in its descent, by an adhesion of, what would have been, if it had descended into the scrotum, its anterior convex edge, to the side of the fundus of the bladder. The adhesion is firm, and almost ligamentous, in its appearance; and there being no trace whatever of recent inflammation, it is fairly inferible, that it was contracted when the testis was in its passage from its original situation to the scrotum. This supposition is strengthened by the fact, that the epididymis is drawn off about three-fourth's of an inch from the body of the testis, seemingly by the contraction of the gubernaculum testis, which is firmly adherent to it. This last fact, the separation of the epididymis from the body of the testis, not only renders it probable that the descent of this organ was arrested by a mechanical cause, as the adhesion above mentioned, but it also stregthens the sup-

position of the contractility of the gubernaculum, by which the transition of the testis is thought to be effected. The vas deferens leading from it is about the same size and appearance as that of the other side, and takes its ordinary course by the side of the bladder to its vesicula seminalis, which is about a third or half an inch shorter than its fellow of the opposite side, and is also only about two-thirds of its breadth.—The internal abdominal ring, canal, and external ring are large, permitting, without difficulty, the passage of the little finger, and terminating in a *cul de sac* lying within the scrotum, about two inces long and an inch and a half wide. Hernia seems to have been prevented by the testis' covering the mouth of the internal ring, its peritoneal pedunclе being sufficiently long to allow its assuming that position, where, indeed, it was found, and seems most inclined to lie.

All the corresponding parts of the opposite side are perfect in their organization and development, and all occupy their ordinary situations.

No history of the indidvidual could be obtained, but from his athletic form, and the full development of his generative organs, there can scarcely arise a suspicion, that impotency existed in his case. This fact possesses some value in its bearing upon legal medicine, and as connected with the question of castration, which sometimes comes up in courts of justice.

The specimen has been placed in the Pathological Cabinet of the Medical Institute of Louisville, where it may be seen.

*June*, 1840.

ART. IV.—*A Case of Paralysis of the Bladder terminating fatally.* By F. WALTON TODD, M.D., of Port-Gibson, Mississippi.

DR. W. was called a few days since to see a negro man, who being delirious was unable to say what was the matter with him; and though he had a family it was not ascertained, that for several days he had not evacuated his urine. He seemed to be suffering intensely, and, in a way which was not intelligible, referred to some abdominal distress. Upon examination it was thought, that there was a preternatural distention of the urinary visicle, and a flexible catheter was introduced without difficulty; but no urine passed. A metalic instrument was then used, but with the same result; he was finally placed so that the water would gravitate, but all without effect. In a few hours he died, and upon examination the bladder was found immensely distended, with a thin, not unnatural fluid; the catheter which had been introduced was found to have penetrated the bladder successfully, which contained four or five pints of water. There were no traces of inflammation; no morbid appearances, within the bladder, prostrate gland, or urethra; no obstruction in the urinary passages, but a perfectly normal condition of the internal coat of the bladder and urethra. I look upon this case as one confirming the fact, that in paralysis of the bladder urine will often not pass by the catheter, without grasping and compressing the visicle, and sometimes cannot be drawn off except by paracentisis. I have since seen an analogous case reported by a Parisian writer to the Boston Medical and Surgical Journal, where M. Cruveilhier had no better success with the catheter unaided by compression.

*June*, 1840.

# REVIEWS.

ART. V.—*Crania Americana; or a comparative view of the Skulls of various Aboriginal nations of North and South America: To which is prefixed an Essay on the Varieties of the Human Species. Illustrated by seventy-eight plates, and a colored map.* By SAMUEL GEORGE MORTON, M.D., Professor of Anatomy in the Medical Department of Pennsylvania College at Philadelphia; member of the Academy of Natural Sciences of Philadelphia; of the American Philosophical Society; of the Historical Society of Pennsylvania; of the Boston Society of Natural History, &c., &c. Philadelphia; J. Dobson, Chesnut street. London; Lumpkin, Marshall & Co., 1839. Letter press, p. 296, folio.

THIS volume is the product of a bold and somewhat original enterprise in the highest branch of natural science—we mean anthropology. And of that enterprise, wide and varied as are its scope and bearings, high its purposes, and important its aim, it is not unworthy. Nor does any thing perhaps contribute more to its attractiveness and value, than its simplicity and unpretendingness—its freedom we mean from self-glorifying theories and doctrines, and more especially from iron dogmas, and air-woven hypotheses. It consists almost exclusively of an immense body of facts, no inconsiderable portion of them new, collected in a laborious and protracted course of reading, observation, and multiform research, and neither misinterpreted, perverted, nor misapplied, in subservience to

the influence of preconceived notions. Instead of itself broaching or even propagating crude opinions, or giving existence and shape to any thing like a premature and ephemeral system, it aims at the ascertainment and confirmation of elementary truths, out of which, as imperishable materials, substantial and lasting opinions and systems may be hereafter constructed.

Dr. Morton, in the great work before us, has neither so restricted his scheme, as to fit it in all respects to the study of man, as *an individual*, nor so expanded it, as to suit it especially to that of mankind *as a single body*. He has given to it rather an *ethnographical* character—adapted it, we mean, to researches into the conditions, analogies, differences, and relative standing of mankind, as divided into *tribes*, *families*, and *nations*. And, if we mistake not, he has had, as a physiologist, the discernment to perceive, and the firmness and independence, as a man and a writer, to select and avow, the veritable ground, out of which those differences of human condition and standing essentially arise. In plain terms; without professing to be a phrenologist, and apparently, if not really, unconscious that he was so—and certainly without any predetermined intention to be either an advocate or an opponent of the new scheme of mental philosophy—under these circumstances, our author's production is as strictly phrenological, as any of the publications of Gall or his followers. And, as will appear hereafter, the entire and fast multiplying host of his facts, as far as they bear on the science, (and from their inordinate number, they might be called "legion") are expressly confirmatory of it. In no respect could its warmest advocates change them for the better, or even wish them changed—we mean as regards their phrenological bearing. In all time to come therefore, the "Crania

Americana" will be referred to, by enlightened anthropologists, in proof and illustration of the truth and importance of the discoveries of Gall. But to come into closer contact with our subject.

That the organic structure of the human body, in its aggregate capacity, is composed of a number of subordinate structures, is known to *every one.* And to the *anatomist* and *physiologist* it is known, that, of these subordinates, the nervous structure, including the brain and spinal cord, holds the highest rank. Though several of the others are as essential to its existence and the efficiency of its condition, as it is to theirs, it is notwithstanding so far the master tissue, as to control the others, and so far predominant in its general influence, as to give to man his native supremacy and fitness for empire, and place him at the head of the animal creation. In all the other structures which enter into his organism, the more perfect of the inferior animals are the equals of man, and in some of them his superiors. In the character of his nervous tissue alone he is pre-eminent. And, in full acknowledgment and demonstration of that pre-eminence, the phrenologist pronounces and proves the brain, which is but a portion of the nervous tissue, to be the *organ of the mind*—to be that instrument, or rather *array of instruments*, (for it is strikingly multiplex in its structure as well as in its functions,) by which alone the mind executes its purposes, and manifests its power. Nor, however different may have been the case, but a few years ago, does any *physiologist* now, who is worthy of the *title*, venture to question the truth of this position.

Such then is the foundation, (the supremacy we mean of the nervous tissue,) on which phrenology rests; and on the same foundation rests essentially the work we are examining; and from that consideration arise, in an eminent degree, its

interest and value. Wherefore? The answer is plain, and easily rendered. It is the difference in the size, form, and general character of the brain, the great nervous centre, which constitutes the leading and most important differences between the several races and varieties of the human family. And to that source does our author virtually ascribe them. True, he refers also to the distinctions created between men by difference in size of body, complexion, hair, features, and personal configuration. These however, he justly considers as but minor points in the production of dissimilitudes. For that difference, which, being itself the chief one, imparts a broad and abiding distinction of constitution and character, he looks not to the blood-vessels, muscles, or bones, nor yet to the viscera of the abdomen or thorax, (though they also are important elements) but to the volume, form, and condition of the brain, as manifested by the size and configuration of the head. Hence the title of his book—"CRANIA AMERICANA"—tantamount, in its import, to CEREBRA AMERICANA.

But in collecting his materials for the volume before us, Dr. Morton did not confine his draughts to the aboriginal tribes and nations of America. Far from it. He framed and filled them under the influence of a more catholic spirit, and with less restricted views, and addressed them to sources much more extended, and more abundant in means. Conformably to this arrangement, he commences his work with an "Introductory Essay on the Varieties of the Human Species," in which he has manifested, for an *American* writer engaged in the active and arduous duties of a profession peculiarly burdened by toils and interruptions, an amount of reading and application, labor and research, exceedingly unusual, if not unprecedented, and rarely equalled, and perhaps never exceeded on any given subject, and under similar circum-

stances, by a writer of any country. He has judiciously done what every author should feel himself bound to do, from respect toward himself, as well as toward the public—gone to his work with a proud ambition, and a determined resolution to attain and master all the knowledge accessible to him, in relation to the subject he is preparing to handle. By no other mode of proceeding can an author, be his talents and *general* attainments what they may, do full justice to himself or his theme, or produce a work worthy in all respects of public favor.

It is not unimportant to remark, and recommend to remembrance (because it may tend to the prevention of cavils and censures, as respects the "Essay" we are examining,) that the expression, "Varieties of the *Human Species*," virtually involves a belief, if it does not amount to an avowal of it, in the Mosaic doctrine of the *unity* of man.

Our author, with the habitual correctness of judgment which characterizes him, has adopted that division of the GREAT COMMUNITY OF MAN, which, though not perhaps perfect, we are inclined to think the best, because it is liable to fewest objections. The division is nearly the same with that supported, if not originally devised, by Professor Blumenbach, and classes mankind under five *races;* the *Caucasian;* the *Mongolian;* the *Malay;* the *American;* and the *Ethiopian.* These races our author himself divides into twenty-two families, in the following order:

"I.—THE CAUCASIAN RACE.

1. *The Caucasian Family.*
2. *The Germanic Family.*
3. *The Celtic Family.*
4. *The Arabian Family.*
5. *The Lybian Family.*

6. *The Nilotic Family.*
7. *The Indostanic Family.*

"II.—The Mongolian Race.

8. *The Mongul-Tartar Family.*
9. *The Turkish Family.*
10. *The Chinese Family.*
11. *The Indo-Chinese Family.*
12. *The Polar Family.*

"III.—The Malay Race.

13. *The Malay Family.*
14. *The Polynesian Family.*

"IV.—The American Race.

15. *The American Family.*
16. *The Toltecan Family.*

"V.—The Ethiopian Race.

17. *The Negro Family.*
18. *The Caffrarian Family.*
19. *The Hottentot Family.*
20. *The Oceanic-Negro Family.*
21. *The Australian Family.*
22. *The Alforian Family.*"

Such is our author's division of man into *races* and *families*: and of the distinguishing and characteristic traits of each division, he gives us a brief but graphical description. On his details however it is not our present purpose to dwell; because neither our time nor our space permits us to do so. Notices of his results are all we must attempt. And even they must be limited and few. We could not make them full and circumstantial, without writing an entire *treatise*, instead of an article for a periodical work. Nor would it be possible for us to endue with either much interest or usefulness, any thing we could say of our author's details respecting man in Europe,

Asia, Africa, or Polynesia. The reason is plain. His work neither contains, nor was designed to contain any drawings of the "Crania" of the "races" and "families" which form the population of those parts of the globe. We have therefore no source of instruction, phrenological or philosophical, either to enlighten ourselves, or to enable us to enlighten others, on the subject of their intellect, morals, fitness for civilization, or general native character and developments. All we have of information respecting them is historical or narrative, or some limited description of person and countenance. And we need hardly say, that from such premises no substantial or instructive inferences can be drawn, as respects either their intellectual or moral endowments, or their prevailing propensities — nothing in fact to throw any clear and satisfactory light on the constitution of their minds.

As respects the American race and families however the case is different. Of them our author has laid before us correct delineations of the "Crania," tantamount to delineations of the *brains* themselves, which necessarily corresponded to the crania, of about *fifty* different tribes, varieties, or nations. And those skulls thus represented to us, when correctly interpreted, speak the language of nature and truth, as regards the mental endowments of the tribes and individuals to whom they belonged.

Are we asked, on what particular mental attributes of their owners those figures of skulls are calculated to throw light? We reply, on every attribute, provided they are thoroughly understood; but more especially on every leading attribute, fitted for the elevation or depression of a people, by giving them more or less of animal propensity, and of general mental power and character. They disclose, for example, the comparative amount of *native* intellect possessed by those

who wore them; the comparative amount of native morality, sociability, and domesticity; the comparative amount of native pride, independence, and love of liberty, self-government, and sway over others; and also the native amount of animality and passion, manifested in sensual appetite, vindictiveness, cruelty, bloodshed, and war. Nor is this all.

The configuration of the skull and brain discloses likewise something of the different modes in which different tribes and individuals wreak their personal vengeance, or conduct themselves in war—whether by a bold and open attack by day, or by ambush and skulking stratagem, in the night. And when two tribes or nations nearly equal in numbers engage in war, the comparative size and figure of their skulls, foretell in language sufficiently intelligible, and which ought not to be listened to with incredulity or disregard, to which side victory and conquest are likely to incline. They are evidences of the possession or destitution of war-like qualities.

That these sentiments will be received with distrust by many, and perhaps entirely rejected by more of our readers, we are prepared to believe. Nor is the cause of this unknown to us. It is the want of an acquaintance with the principles of the new scheme of mental philosophy. For with those principles the sentiments just uttered are in perfect accordance. They are in harmony with the admitted physiological fact, that the brain and nerves are the master tissue in the organization of our bodies; that they control, strenghten, and direct the other tissues; and that, other things being equal, the greater the amount of cerebral matter individuals possess, they will, whether acting alone, or in union with their fellows, prove the more powerful, efficient, and successful in their enterprizes. And the more likely they will be to become civil rulers in peace, and temporary victors, and per-

manent conquerors in periods of strife. Of course, on the contrary, a tribe or nation, whose skulls and brains are comparatively diminutive are, in consequence of that defect, the less able to defend themselves, and the more liable to be vanquished and enslaved, or exterminated, in war.

Such we say are the grounds, on which the sentiments just expressed are founded. And not only are they in unison with the science of phrenology; by many of the plates in the "Crania Americana" they are abundantly sustained. And of the following points respecting human character, those plates furnish also, in equal abundance, matter of satisfactory illustration and proof.—Other things being alike, the more the animal organs of the brain predominate in a tribe or community over the moral, religious, and reflecting ones, the more ignorant and vindictive, blood-thirsty and cruel in war, and other forms of conflict and punishment, whether public or private, will that community show itself.—The larger in a tribe or nation the organs of self-esteem, love of approbation, conscientiousness, and firmness are, other things being equal, the more difficult of conquest will that tribe be found, and the more certainly will it prefer extermination to slavery.—Once more. Other things being the same, large moral, religious, and reflecting organs facilitate the civilization of a people—and the reverse; and when the moral and religious organs are large in a community, and the intellectual, animal and semi-animal ones small, that community will submit to bondage, rather than to extermination, and perhaps even rather than to banishment from its native soil. To illustrate and prove these positions, by materials derived from our author's "Crania."

Those plates demonstrate, that in the brains of what the writer calls the "American family," which constitutes chief-

ly the aboriginal people of *North* America, the reflecting, moral, and religious organs are comparatively small, and the animal and semi-animal ones proportionably large. And the experience of more than two centuries has abundantly evinced, that that "family," as a body, can be neither civilized nor actually conquered and enslaved; but that their ultimate extinction is an event which is approaching, and whose accomplishment nothing earthly can prevent. This is true of the entire family, on account of the general similarity of their organization, the animal and semi-animal portions of their brains being preponderant. But in some branches of the family this is more signally the case than in others. And their propensities and characters correspond, with great exactness, to their cerebral developments. Thus the animality and semi-animality of the Charibs are immense, while their moral, religious, and reflecting organs are correspondingly small. And they are, beyond all other tribes, wild and indomitable, ferocious and sanguinary. Fierce, warlike and unyielding, rather than submit to conquest and slavery, or to any form of civil restraint, they covet extermination, which is nearly accomplished. Of the Huron tribe, whose cerebral developments are in no small degree analogous, the same may be said. They have refused to yield, have fought desperately, and practised every form of cruelty, and are nearly extinct. With an organization and development of brain, and a condition of mind not dissimilar, the Seminoles are pursuing at present a course of warfare, which, if not abandoned, must lead in the end to a like result.

Possessed of brains, as appears from their skulls, more liberally supplied with moral, religious, and intellectual organs, the Creeks, Choctaws, and Cherokees, though brave, warlike, and proverbially artful, have shown themselves less inexorably

cruel, and less brutally devoted to havoc and blood. They are even reported by a few persons, and believed by many, to exhibit faint glimmerings of an approach to civilization. This however is but groundless rumor. Even of the Cherokees, believed to be the more cultivated of the three tribes, this may be affirmed. The "*full-bloods*" among them are degraded savages. It is the "*half-bloods*" alone, and other mixtures, more or less approaching full Caucasianism (and their number is small) that exhibit any positive traits of civilization and improvement. The chieftain Ross was almost white; Opotheoholo had also much Caucasian blood in him; and the inventor of the celebrated Cherokee alphabet was the son of a Scotchman. And the cerebral developments of the two first named of these, whom we saw in Washington, corresponded sufficiently with their talents and characters. Nor indeed can the Scotch-Cherokee be correctly pronounced the inventor of the alphabet in question. He was only the fortunate receiver, from a Caucasian of a plain and practical suggestion, of which the alphabet was ultimately the product. The stories so widely and zealously circulated, proclaiming the Cherokees an industrious, civilized, agricultural *people*, are rank fabrications, designed no doubt for selfish and party purposes. Considered as a tribe or nation, nineteen out of twenty of them, and perhaps even a larger proportion, are indolent, degraded, and miserable savages. And, instead of having property, as they are asserted to have, a majority of them, probably not much less than that just stated, are pennyless wretches, in a much worse condition than Caucasian paupers.

Another tribe well worthy of being noticed in this place, on account of the light it sheds on the connexion between

cerebral development, mind, and character, is the *Araucanian.* That people inhabit one of the Chilian provinces, toward the southern extreme of South America, and in the excellent development of their brain, as well as in their amount of native intellect, improvability, vigor, and general efficiency of character, stand at the head of the American "RACE," the Mexicans and Peruvians, of former times, in some respects excepted.

In size and shape, the skull of the Araucanian makes a nearer approach to the skull of the Caucasian, than that of any other variety of the aborigines of America. And so does the individual himself in quickness, strength, and compass of mind, and in the energy, firmness, and efficiency of his action, whether he be engaged in hunting or war, or in any other less exciting and perilous pursuit. In the organs especially of Self-esteem, Firmness, Conscientiousness, Combativeness and Love of Approbation, his developments are large. *Hence* his lofty pride and spirit of independence, with his devotedness to a life of liberty, and his resolution to maintain those priviliges at every hazard and every cost, have never yielded under any form of adversity, or degree of suffering. For perhaps a century and a half his unconquerable daring, and determination to be free have led him to sustain a ceaseless war with the Spaniards on his borders; and his resources of intellect, but little inferior to those of his foe, and disciplined into skill by trial and experience, have enabled him to do so with uniform success. Still however do his boundless pride, and his reckless and ungovernable aversion from the slightest check on his licentious freedom, coupled with a deficiency of reflectiveness and moral feeling, prevent him from submitting to the mild and salutary restraint of civilization. With all his qualifications therefore for a different state of

life, he is still a savage. And he is so, as the result of his cerebral development, which renders him intolerant of the control of law, and makes him resolve, like Christian, in Byron's "Island," "to live and die, the fearless and the free."

When attentively studied and thoroughly understood in their nature and relations, the whole case and condition of the Mexicans and Peruvians, ancient and modern (for *they* have their ancient and modern epochs as distinctly marked, and contrasted in as broad and bold relief, as the Europeans and Asiatics)—the case and condition of these nations, when fully and correctly comprehended, present one of the most extraordinary spectacles in the history of man. And, as a moral problem, its solution is as difficult, not to say impracticable, as its aspect as a phenomenon is singular and interesting. Though reiterated attempts to that effect have been made by philosophers the most distinguished for their general knowledge and powers of research, no approach that can be called even *seemingly* successful, has yet been made toward causes competent to the disentanglement of the *knot.* True; efforts have been tried to dissever it by the sword—not of *reason* and *science*, but of *fancy* and *conjecture;* and the blows have but rebounded on the feeble pretenders and aspirants who unskilfully dealt them.

Somewhat more we believe than three centuries ago, Mexico and Peru were found by two bands of European rovers, in the singular, not to call it the *marvellous* condition to which we have referred. They were two populous and apparently powerful empires, under the restraint of discipline and law, and not a little advanced in civilization, wealth and science, luxury and the arts. Yet they had but little, if any, intercourse with one another, and none with any other civilized people, and were situated like two vast islands in a track-

less and unexplored ocean, or two mighty oases in the midst of a boundless desert of ignorance and savagism, degradation and poverty. Nor could there be discovered, we repeat, by the ablest scheme of research that could be instituted, any adequate causes of the immense difference, in matters of mind between them and the various nations around them. In most respects the phenomenon was unique—no parallel to it then existing, or having previously existed, within the purview of history.

Greece, received much of her civilization, science, and arts from Egypt; Rome from Greece; and other parts of Europe from the Italian repositories of intellect and science, literature and taste. But for Egypt no extraneous source of instruction has yet been found—nor perhaps even fancied. Like an electron *per se*, she seems to have been to herself, from her own native endowments, the source of her own pre-eminence and grandeur.

Of Mexico and Peru the same may be affirmed. They stood alone, instructed without instructors, civilized without the influence of examples to that effect, and splendid and mighty from the working of causes inherent in themselves. Like Egypt therefore they seem to have been *originals;* not imitators, copyists, or dependents on others instead of themselves.

Such were some of the peculiarities of the Mexicans and Peruvians. But not the whole of them—nor even perhaps the most striking and unexpected. Though constituting great and independent nations, they were *no warriors*, and became the victims and slaves of a mere handful of freebooters, visiting them from a distant portion of the globe. At the head of less than two hundred Spaniards, Pizarro overthrew and reduced to the most servile condition the empire of Peru, with a popu-

lation of several millions of subjects, affectionately attached to the person of their chief, and enthusiastically devoted to their religion and government. And with a Spanish band of less than five hundred, aided by auxiliaries from some of the surrounding nations, Cortez conquered and enslaved the more populous and powerful empire of Mexico—two events which, as already intimated, are uninterpreted enigmas in the history of man. To what cause or combination of causes shall we look for an explanation of the fact, that victory bound her chaplets on the brows of the few, in conflicts where their adversaries outnumbered them in the ratio of *ten thousand to one?* In such a case, had not the Mexicans and Peruvians been essentially deficient in some high qualities indispensable to success, they could, with perfect ease, have thrown themselves on their foes in numbers so overwhelming, and with a force so irresistible, as literally to tear them into fragments, or trample them under foot, and crush them in mass. Nor could any form of armour, or mode of battle have saved the invaders from such an issue. It is a question then, in anthropology, of no common interest, what were the qualities in which the South Americans were so fatally deficient? It was not in abstract personal courage. In conflicts with each other, and in wars with the surrounding nations, they not only manifested ordinary bravery, but had become the conquerors and masters of the land. It was not in personal strength and activity. In those qualities they were but little, if at all, inferior to their invaders. And the prize for which they fought was of the highest value, and the most inspiriting character, including all that is dearest in life. It was their fire-sides and their families, their altars, and the hallowed ashes of their ancestors. It was every thing that enters into the all-absorbing thoughts, and the soul-inspiring sentiments of the man

and the patriot, which should render him invincible, when doing battle for his *home* and his *native land.*

Nor was it, as most writers and pretended wise-ones on the subject have contended, their vast superiority in military discipline and skill, acquired by more abundant experience in war, that rendered the few Europeans so easily triumphant over the almost innumerable hosts of Americans. Far from it. The difference in military tactics, as far as experience was concerned, between the two contending parties in Mexico and Peru, was not greater, perhaps not so great, as that which existed between the legions of Cæsar and the barbarous hordes with which he contended in Germany, Gaul, and Britain. Yet the issue of war in the two hemispheres was widely different. Notwithstanding his skill and invincible hardihood, as a soldier, and his boundless resources of mind, as a chieftain, Cæsar rarely won a cheap or an easy victory, even when the numbers he led to battle were but little surpassed by those of his enemy.

Others have attributed the easy conquest of the Mexicans and Peruvians to the superstitious veneration in which they held their ruthless assailants, regarding them as beings of a superior nature, who had descended to them from the skies, to become their rulers and benefactors. But that a delusion of this kind took possession of the Americans seems highly improbable. And it is still more improbable, even admitting its occurrence at the first moment of the arrival of the roving marauders, that it should have been of long duration. The inhabitants of the New World must have very soon discovered that the emigrants from the Old were as subject as themselves to bodily injuries, sickness, and other misfortunes and infirmities, and to death itself from wounds and diseases. It is even probable if not certain that, from some of these sources of calami-

ty, especially from that of *seasoning* sickness, the strangers must have suffered much more than the natives. And if our recollection fail us not, such was actually the case. Many of the Spaniards sickened, and not a few of them died, while those whom they had reduced to bondage remained healthy. From the notion of their *divinityship* therefore, admitting it to have had an existence, the "Iberian freebooters" derived in the end but little advantage. There is reason to believe that such advantage was more than counterbalanced by the scorn which their mean cupidity, and the detestation and abhorrence which their cruelty and revolting profligacy engendered.

Still then does the question, "why were the Americans so easily subdued?" remain unanswered. And the correct answer, virtually but silently rendered in the "Crania Americana," is derived from the science of phrenology alone. They were engaged in war with a race of men *superior to themselves*—though not descended immediately from the skies. *For the Spaniards were Caucasians.* And whenever or wherever that race, which stands at the head of the great community of man, (as the nervous and cerebral tissue takes rank of the other tissues of the body,) comes into collision, whether belligerent or pacific, with either of the other races, it never fails in the end to gain and maintain a decided ascendency. To this position we confidently believe that no solid exception can be adduced from either fact or philosophy—the examples of the present, or the history of the past. Nor is it from occurrences in the New World alone that it receives at once illustration and proof. By a phenomenon of equal moment, notoriety, and interest, or rather perhaps of much greater, in the Old World, it is further and no less substantially maintained. We allude to the degraded condition in which

Hindostan, and several neighboring principalities are held by a British army, which, from its incredible inferiority in numbers to the almost boundless amount of the population it controls, might well be deemed infinitely incompetent to the mightiness of the task. That army, containing less than *eighty thousand* rank and file, not a moiety of them, we think, being natives of Europe, has already conquered, now holds in check, and virtually consigns to a degrading vassalage, one hundred and twenty millions of human beings!

To what cause or causes is this astonishing issue ascribable? The answer we think plain. The Asiatics, though not all of a really different *race* from the Europeans who enslave them, are a *degenerate*, perhaps a mongrel branch of the same race. They are not genuine Caucasians; while a large portion of their conquerors and masters, are Anglo-Saxons—that variety which stands decidedly at the head of the Caucasians, and is their highest caste.

Are we asked to specify the actual difference between the Anglo-Saxon and the Hindostanic varieties of man, which gives to the former such a marked superiority over the latter? We reply that it consists in the different size and form of the brain in those varieties, which are fully disclosed, by corresponding difference in the size and form of their "crania." Not only is the *entire* brain of the Anglo-Saxon considerably larger than the brain of the Hindoo; the superior and truly governing organs of it are larger in a still greater proportion. Are we again asked to name those ruling and power-bestowing organs? They are, we reply, more especially Combativeness, Destructiveness, Self esteem, Approbativeness, Frmness, and the *reflecting* organs. All the organs calculated to give greater strength and energy of character, and greater scope and vigour of thought, are larger. Hence the native and ne-

cessary superiority of the Caucasians, especially of the Anglo-Saxon branch, in war, as well as in the higher walks of science, literature, and the arts.

For the easy conquests of Mexico and Peru, similar causes may be correctly assigned. Those events were attributable, not to any superiority of civilization and education, on the part of the *invaders.* In these points the *invaded* were nearly, if not quite on an equality with them. The cause was to be found exclusively in the superiority of native strength and compass of mind on the part of the Europeans. And those qualities arose from the greater size, and better development and configuration of their brains.

The Spaniards were a branch of the Caucasian race. And though they did not belong to the most highly gifted and most efficient branch, they were greatly superior to the American race, with whom they were in conflict. And that superiority was indicated by the greater size, and better development and shape of their crania and brains. They had, in their cerebral organization, a larger endowment of ground for intellectual qualifications, and comparatively a less preponderance of that forming the seat of mere animality. And these native advantages of brain bestowed on them a range and measure of mental compass and power, which the inferiorly organized, and weaker-minded Americans were unable to resist. Those comparative *imbeciles* stood related to their *vigorous assailants,* as boys do to men, idiots to sound-minded persons, or as inferior animals to the human race. Hence the amazing suddenness and completion of their overthrow and degradation!

Groundless and visionary as this position will no doubt appear to those who have *never made the subject of it a matter of study,* it will present itself in that light to *such persons only.*

Individuals sufficiently acquainted with it will view it very differently. They will regard it as one of the most grand and impressive physiological truths that has ever been disclosed. For physiological the phenomena it relates to are—as clearly and decidedly so, as the digestion of food, the secretion of bile, or the circulation of the blood. Yet was it never dreamt of as such until the discoveries of Gall, which will yet be acknowledged to constitute themselves one of the chief scientific triumphs of the nineteenth century; while their fruits will be deposited in the temple of Philosophy, among the most glorious and invaluable trophies her ministers have won.

Nor is it the so deemed mysterious events of the conquest of Mexico, Peru, and Hindostan, that the discoveries of the great German are destined to illuminate and make intelligible and useful. They will render to mankind a similar service, as relates to many other enigmas that have confounded the anthropologist and eluded his scrutiny. In truth they will yet be referred to, by the students and masters of mental and moral science, as the great expounders of the philosophy of history. They will shed on the deeds and characters of the ancient Greeks a light which the world has never yet enjoyed. They will disclose the causes of the ambition, wars, and conquests of Philip and Alexander. They will tell why Cæsar first glorified and then enslaved his country, and ultimately fell by the dagger of Brutus; why the Roman empire, after having become and continued for centuries, a marvel of power and greatness, injustice and crime, was reduced at length to a mighty ruin, by barbarian invaders; why Palestine was inundated by the mingled blood of the Crusaders and the Saracens; why the clouds of the Dark Ages, brought down on the world by the disasters of the sword, were ultimately dispersed by the return of the sun of literature and science; why Napo-

leon first astonished the world by the miracles of his greatness and power, and then ended his career in captivity and exile; and why our own country was rendered independent and glorious, by Washington and his compatriots; and has increased in wealth and renown, and their concomitants, with a rapidity and steadiness altogether unprecedented in the annals of nations.

These were all physiological events, produced through the functions of the human brain, and will hereafter be universally acknowledged as such, by those who shall become competent judges of the subject. And for this great result, the world will be indebted to the genius and labors of the founders of phrenology. Physiologists and philosophers will learn and acknowledge, that man, to be studied correctly, as a being to be acted on mentally himself, or to act by mind on others, whether for elevation or degradation, for good or for evil, *must be studied through his brain.* And that in all their manifestations and conditions, his moral and intellectual natures, instead of being any longer investigated by or through the laws, supposed to regulate abstract spirit, must be approached and comprehended (if comprehended at all,) through the instrumentality of the material machinery, on which his spirit immediately acts. In other words; that all the events and phenomena, in which man is concerned, either as agent or subject, and whether they be peaceful or belligerent, scientific or literary, instead of being regarded, as heretofore, as the *immediate* products of mind, will be considered, in time to come, as referable to mind, only through the attributes of the nervous system. Thus will anatomy and physiology be justly ranked among the most elevated branches of human knowledge, and be received and recognized as the true foundation of anthropology and mental philosophy.

This digression however we must pursue no further, but here conclude both it and our review. Meantime it is our purpose to bring the "*Crania Americana*" once more before the public, in a future number of the Journal, when we shall endeavor to submit to our readers a fuller, more direct, and more detailed analysis of it, than we have given in the present. C. C.

## Selections from American and Foreign Journals.

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*Case of Introsusceptio cured by forcing Air into the Intestines.*—James Thompson, æt. 44, of a rather spare habit of body, but in the general enjoyment of good health, was suddenly taken ill with pain in his bowels, about ten o'clock in the evening of the 25th Nov. last. He took some spirits, warm drinks, bathed his feet in warm water, and applied warm fomentations to the belly, thinking the pain would wear off. It continued to increase however, and I saw him on the morning of the 29th. I found him laboring under the following symptoms. Pulse full and not particularly hurried—tongue clean—face anxious—belly not distended, and particularly relieved by severe but equitable pressure. No alvine discharge since 4 P. M. the preceding day—pain about the umbilicus most excrutiating—not steady, but at intervals of from three to four minutes, accompanied by severe vomiting and great thirst. I immediately ordered a purgative glyster, which came off almost immediately, bringing with it the contents of the rectum without abating the pain. I ordered its repetition —part returned the same as thrown up, and part remained; but the violent pain still continued. I then applied a blister over the whole surface of the abdomen, and give him a powerful opiate; after an hour this settled the vomiting, and in some degree dulled the pain. I then gave him s. m. hyd. gr. xii. and left him. Twelve hours after the pain and vomiting had returned as violently as ever—still no pain on pressure. I then endeavored to open the bowels by throwing up as much warm water by the domestic machine as I possibly could; he complained of straitness, and part of the water returned without any effect—I then repeated the calomel and left him. On the morning of the 27th, the calomel had proved useless, and the vomiting and pain were as violent as ever; thirst severe, and perspiration profuse. On pressing the belly pain was

now felt in the region of the caput cæcum. It was now evident that unless he was speedily relieved death must ensue. I again attempted to overcome the obstruction by throwing up about a gallon of warm water until it was forced back and a considerable part discharged without the least relief. Having some little time ago seen the injection of air suggested in cases similar (I think in a recent Number of the Medico-Chirurgical Review, although I cannot lay my hand upon it now,) I determined to try it. Having nothing at hand but a common bellows, I inserted the tube into the rectum, and commenced gradually to force up the cold air. As soon as it found its way into the intestines, the patient said he felt somewhat easier, and I persevered until I could force no more. In a second or two the rarified air, was forced back with great violence bringing with it the remaining portion of the water I injected, but nothing more. He said he felt rather easier and urged its repetition. This I did for other two different times with no appearance of relief. On the fourth trial, however, the room was filled with a most fetid smell caused by a very free discharge of fæculent matter—he felt relieved, the vomiting ceased, and he complained only of general soreness. I now gave him 8 grs. of cal. with one grain p. opii and left him. That evening he had an alvine discharge, and the following morning he got ol. ricini, ʒj. which operated freely in the course of the day, and the cure was complete.

Whether the foregoing case was real introsusceptio or not I am not prepared to say, but I am sure of this, that, had I not succeeded by the forcing up of air into the intestines, there were no other means that I am aware of whereby I had the least chance to save the poor fellow. I have given the case at this length, as I conceive the plan pursued worthy the attention of the profession in similar cases. It would be absurd to draw a conclusion from a single case, but from what occurred to me in this instance, the practice appears to be perfectly harmless, since the moment the air became rarified it came off with great force, and left no disagreeable consequence behind.—*Medico-Chirurg. Review.*

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*Dividing the Internal Rectus Muscle for the cure of Squinting.*—William James Egan, aged 10, was born with his eyes perfectly straight. When he was two years of age he suffered from convulsions, and after a more severe one than usual the strabismus took place.

*Present state.*—His left eye turned deeply inwards, with a

slight degree of obliquity upwards; its sight is not so powerful as that of the right; there is a slight degree of opacity of the inner circumference of the cornea, and the organ is more sunken than its fellow. With much exertion the patient can evert the eye to the extent of about four lines.

With the assistance of Mr. Downing, Mr. Bailey, Mr. Earles, and Mr. Snow, I performed this operation as follows: The eyelids were held apart simply by means of the fingers; I seized the inner conjunctiva with a small sharp hook, and divided this membrane from below upwards, with a fine narrow bladed knife. At the instant of doing this the eye forcibly turned more inwards, which retarted the operation a a few moments: keeping the hook still fixed in the inner segment of the divided conjunctiva, I allowed the lids to cover the globe, and a few drops of blood were wiped away by means of a sponge and cold water. Exposing the eye again by simply elevating the upper, and depressing the inner lids with the fingers of two assistants, I readily exposed the incision of the conjunctiva, and having separated the connecting reticular tissue by a blunt probe, as in the other cases; I introduced the blunt hook, and with much facility passed it from below upwards, beneath the inner rectus muscle, and drawing it forwards, I divided its tendon with a curved scissors.

The tendon of the muscle was unusually thick and strong, far different from the appearance which it presented in the other cases; it *grated* beneath the blades of the scissors upon dividing it, which, being accomplished, the eye became instantaneously straight.

The whole operation only occupied two minutes.

In this case the speculum was dispensed with, and the only instruments used were a hook, a knife, a probe, and a scissors.

After the operation a cold bread and water poultice was applied to the eye, a powder, consisting of Jame's powder and calomel, was given, and the boy was put to bed.

This little patient evinced great strength. I explained to him beforehand the object of the operation, and saw he could assist us by everting his eye as much as possible, and which he did at the time it was most needed.

*Remarks.*—Were the operation of dividing the muscles of the human eye for the cure of strabismus, attended with danger to the organ of vision, with consequences of even a much less serious nature, the propriety of its performance might justly be regarded as questionable. But when it is considered that no bad consequences have followed this interesting operation—that the patient suffers but little during its perform-

ance—and that, in the cases to which it is applicable, the most gratifying success has attended it; its extensive application to the removal of strabismus cannot be too forcibly insisted upon.—*London Lancet. American Med. Int. June* 15, 1840.

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*On the Prevention of Tubercles.*—In a letter addressed to the Royal Academy of Medicine, M. Coster announces that, from certain experiments which he has made, he hopes to prove,

1. That it is possible, even in the face of predisposing causes, to prevent the development of the tubercular diathesis.

2. That even where the formation of tubercles has commenced, their progress may, in a great number of cases, be arrested.

The following are a few of the experiments upon which M. Coster has built up his hopes:

Two years ago he placed a number of dogs, rabbits, &c., in the circumstances most favorable to the development of the scrofulous diathesis. Thus, many of the unfortunate animals were shut up in dungeons, without light, incapable of moving, and exposed to a moist cold by means of wet sponges which were hung up in the cages. Some of the animals which were placed in these conditions, were fed on their ordinary diet; others were fed with ferruginous bread containing ½ oz. carbonate of iron to the pound. All the former became ill, the greater part tuberculous, but not one of those fed on the bread containing iron presented a trace of tubercles.—*London Lancet, from Bult. de l'Acad., Jan.* 31, 1840. *Med. Examiner, May* 16, 1840.

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*On the Adulteration of the Sulphate of Quinine.*—The recent rise in the price of sulphate of quinine has induced many unprincipled venders of drugs to adulterate it with various ingredients; to such an extent, indeed, has this been carried, in some instances, that not more than a fifth part of what was sold as sulphate of quinine really consisted of that substance. M. Vallet found that the substance chiefly used for the adulteration of the sulphate of quinine was Mannite, a substance similar in external appearance to the sulphate of quinine, but destitute of all the valuable properties for which quinine is so justly celebrated. He found, however, that the adulteration could be with great ease detected by means of

pure alcohol, which dissolves the quinine alone, but leaves untouched the mannite, which, however, is freely soluble in water and of its characteristic sweet taste.

M. Dubail has also arrived at the same conclusions as M. Vallet, and in pursuing his investigations, met with one sample of the sulphate of quinine, which, though presenting all the external characters of the genuine unadulterated drug, both as regarded its lightness and silky appearance, did not contain above a sixth part of its weight of sulphate of quinine. The rest was composed of mannite, insoluble in alcohol, but soluble in water, and of a sweet taste.

M. Pelletier has found that that which is sold in sealed packages, with the impress of his own seal, has also been subjected to adulteration, but the substance used in this instance, is gypsum. The same test, however, viz. the solubility in alcohol, applies to this case, so that every druggist would do well to apply this simple test to the sample of this drug before purchasing.—*Edinburgh Med. and Surg. Jour., from Journal de Pharmacie*, January, 1840.

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*Notice of a New Monstrosity; A portion of a Fœtus living upon the Testicle.* By M. Velpeau.—The case on which I propose to engage the Academy to-day, is one of the most strange that the sciences of observation have yet had to consider; interesting at once to surgery, pathology, anatomy, generation, physiology in general, it appears to be without parallel among known facts. It relates to a living portion of a fœtus fixed in the testicle of an adult, where it seems to have been developed and to have lived since his birth. This is a peculiarity so contrary to what we know, and is at first glance so incomprehensible, that one might be justified in doubting its existence if I did not possess the substantial proof of it in the preparations here presented, and if the patient and the tumour had not been observed by several hundreds of practitioners and students, and if the operation had not been performed in the presence of 500 persons. The case is, in a few words, as follows:

A young man, named Gallochat, of Esterney, aged 27, of a good constitution, and who had never suffered from any severe disease, was sent, in the middle of January, to M. Andral, who at once passed him over to my division in the Hopital de la Charite.

On examination, I found that the patient had a tumour, nearly as large as a fist, on the right side of the scrotum. It

appeared unconnected with the substance of the testicle; the skin over it presented no analogy to that of the scrotum, and it did not appear to me to belong to any known class of tumours. Although several surgeons thought it might be referred, some to the cancerous tumours, some to the fibrous, and some to the tuberculous class, I did not think it possible to adopt their opinion. Observing, moreover, that its origin dated back to the patient's birth, that it was not perceived at its commencement, that it had never produced any pain, that no pathological process had been set up in it, and that it could be cut, or pricked, or pierced through and through, without causing the least suffering; taking notice also of the aspect of the skin which covered its external surface, of its elasticity, of the indurations which it presented internally, of a tuft of hair which came from a kind of ulcer at its posterior part, of a reddish tubercle at the bottom of another opening anteriorly, and of a glairy or grumous matter which the patient had sometimes discharged; I came to the idea that it was a *fœtal tumor, a product of conception.*

Wishing to obtain exact information on the earliest history of so singular a production, I wrote to M. Senoble, physician at Esternay, who answered me thus: "At the age of about four months, the mother of Gallochat came to show me her child; he then had a tumour, or merely a swelling of the scrotum, which I found to be only a pneumatocele. Some months afterwards, I found, on examining him again, a small inflamed tumour, which appeared to me to be a slight phlegmon, and which yielded to simple emollient local applications. I heard no more of him till at the end of three or four years, when I learned that the child's tumour still continued enlarging." Now although these details were very incomplete, they yet strengthened me in my first opinion; which seemed so singular to those to whom I mentioned it, that I alone held it. I therefore planned the removal of the tumour without taking away the testicle, intending to perform a kind of *Cæsarean operation on the man.* The details of the proceeding belong entirely to surgery, and need not now occupy me; it may be sufficient to state that its results were satisfactory.

The examination of the tumour has enabled me to detect nearly all the anatomical elements of the body of a mammal. Thus, its external layer is evidently cutaneous; the greater part of its substance is a mixture of lamellæ and fibres which give the idea of the cellular, adipose, muscular, and fibrous tissues. In its interior, we found two small cysts filled with matter like albumen or the vitreous humour of the eye; another cyst,

as large as a partridge's egg, contained a greenish yellow and semi-liquid matter like meconium; in a fourth sac there was a grumous substance, of a dirty-yellow colour, concrete, and surrounded with hair. The substance from this last sac, when analyzed and examined with the microscope, presented all the characters of sebaceous matter and scales of epidermis. The hairs did not appear to have any bulbs at their bases. The tuft of hair which was seen externally, protruded from one of these cysts—from that which was filled with greenish matter; and the opening in it had some analogy with an anus.

Lastly, in the midst of all these elements, we found numerous portions of the skeleton perfectly organized, evidently belonging (as any one may convince himself by examining the preparation) to true bones, and not to accidental productions. These bones, which were every where enveloped by a sort of periosteum, and of which the several pieces were moveable upon each other, and had distinct articulations, may be divided into three sets. The first group is essentially composed of three pieces, in which I thought I could recognize the clavicle, the scapula, and a part of the humerus. The second group, much larger than the preceding, appears to belong to the pelvis, or perhaps to the base of the skull; the body of the sphenoid, or else the sacrum, forms the central portion. Lastly, the third series seems to comprehend portions of vertebræ and fragments of undetermined bones.

Whatever be the name that the different portions I have pointed out may deserve, certain it is that they belong to a product of conception, and to a fœtus already far advanced in its development. They are before the Academy, and the correctness of the fact is absolutely incontrovertible. In the monstrosity by inclusion, as it is called, which has been described by Dupuytren, Geoffroy, and Olivier, one of the fœtuses absorbed by the other has always appeared surrounded by a cyst, and in the condition of a foreign body in the tissues of the fœtus which has continued alive. In the cases related by Saint-Donat, Prochaska, and others, of the debris of fœtuses contained in the scrotum, there have always been encysted tumours, necrosed bones, and organized parts destroyed by suppuration and in a state of decomposition. In this subject, on the contrary, every thing has continued to live. The abnormal tumor had its own proper colour, consistence, and sensibility, entirely independent of the individual who supported it; a clear well-defined line separated the integuments of its skin from the scrotum. I pinched it with all possible force; I pricked it with various instruments; the

young man himself several times ran a knife into it, without feeling the least painful sensations; and yet all the wounds that were made in it bled abundantly, inflamed, and cicatrized, like those of any other part of the body, and nothing indicated in it the least diseased condition. The substances, and all the elements that were found in it, gave the idea of normal tissues or products, and we were quite unable to discover the existence of the least drop of pus, or of any carious or necrosed bone, any altered cartilage, or the least fungous production.

When, on the other hand, one observes that the tumor was as large as a fist—that the surgeon who saw the child when four months old scarcely took notice of it, and that he took it at first for a pneumatocele, and then for a little phlegmon, which terminated by resolution—it is difficult to believe that its volume was as considerable at the birth of the patient as it was the time when I first saw it. Such a mass in an infant would certainly have attracted great attention both from the physician and the family. We must remember, moreover, that, according to M. Senoble's statement, the tumor continued to grow at least up to the age of six or seven years, and that the young man, who says that it has always had the same appearance, can scarcely charge his memory so far back as that time of his life: we must therefore conclude that the portions of the fœtus which I have described have lived and been developed simultaneously with the individual who bore them, and that there were thus two beings united to one another.

Now how could this take place? Did a part of the fœtus, the remainder of which has disappeared, become attached, during intrauterine life, to the scrotum, in such a manner as to remain there in the form of a graft?—or can this be the remains of a fœtus which at first passed into the abdomen of another, and then descended by the tunica vaginalis, and has at last worn away from within outwards the envelopes of the scrotum?—or, lastly, have we here a creation, the unaided product, of the testicle? But I desist; these are delicate questions in high physiology and in transcendental anatomy, which I am neither able nor willing to broach till the preparations which suggest them have been submitted to the judgment of the Academy.—*London, from Paris Medical Gazette, Feb.* 15, 1840.—*Medical Examiner, June.*

The following interesting facts were communicated to the editor of the Boston Medical and Surgical Journal, by Dr. Silas Brown, of Wilmington.

### FACTS IN RELATION TO VACCINATION.

I submit the following statement of such facts as have recently come under my observation, hoping that they may prove useful in convincing the skeptical of the efficacy of kinepox as a substitute for small pox. Many reports have been in circulation among the people, in this vicinity, detrimental to the expansion of cowpox, which have caused a delay of vaccination till the smallpox has broken out in some of their families. One is, that it will serve only a temporary purpose; and unless re-vaccinated, a person is as liable to have the smallpox after vaccination as before. Another is, that it only answers a partial purpose, and will not wholly insure a person against variola or varioloid, and therefore he may through life live under continued apprehensions and fears of the contagion of those varieties of the same disease.

It is not my object to give a detailed account of the treatment of my patients, but merely to show that the cowpox has been an effectual antidote to smallpox in the several instances to be described.

About the first of February last, the smallpox made its appearance in four different families, in one of our school districts; the subjects were four scholars; the first a lad about 18 years old, the second a girl about 12, the third a girl of 9, the fourth a boy about 8. Neither of them had ever been vaccinated. The family to which the first belonged consisted of four members, all adults, besides the patient, two of whom had been vaccinated and two had not. They were all vaccinated as soon as the eruption gave satisfactory evidence that the patient had the smallpox. It proved a severe case; the face was so swollen that the patient's eyes were closed for several days. The eruption appeared on the 4th day of February and ran through its course without a secondary fever, and he speedily recovered his health. Now it is the 4th day of May, and neither of the vaccinated persons has suffered any sickness, except what follows vaccination.

The second broke out on the 5th day of February, and a similar case to the first, till the 13th, when the secondary fever took place, accompanied with cough and inflammation in the lungs, which continued till the last of the month before her fever manifested any abatement, and her friends despaired

of her recovery. She is now restored to health, May 4th.—The girl lived in the house with her grandmother, uncle, aunt, and a large family of cousins. The uncle, aunt, and several of the cousins had never been vaccinated till two days after the eruption appeared upon the patient, when the whole family were vaccinated, and have suffered no inconvenience, except from vaccination, to the present time, May 25th.

The eruption upon the third patient appeared on the 5th of February, was of the distinct kind, and ran a regular course. The secondary fever was slight, and the patient recovered without any distressing symptoms. The parents of this child had been vaccinated nearly 30 years, and part of the children about three years. The remainder I vaccinated two days after the eruption appeared upon the patient. The youngest, a child about two years old, kept with its mother, who had the care of the patient, night and day. About the 11th day after vaccination, the child had a sore arm and other symptoms accompanying cowpox, and appeared more feverish than the other children vaccinated at the same time. On the 14th day from the eruption of smallpox on the other patient, the infant broke out with varioloid, which passed off in a very mild manner, and was the only case of varioloid which occurred among the numerous members of the above-stated families. Is it not probable this child had received the contagion previous to vaccination?

The fourth patient broke out on the 7th of February. His disorder ran a regular course, and terminated favorably. The family consisted of four adult persons and one infant. The mother of the patient and the infant had not been vaccinated previously to the sickness of the patient, but they were soon afterwards, and the other members were re-vaccinated at the same time. Now it is the 25th of May, and none of them have suffered any sickness, except what is consequent to kinepox.

I was called to a child the 8th of April, in a neighboring town, about six months old, with an eruption which proved to be smallpox of the distinct kind, and which ran a favorable course. The parents of the child and other children of the family had been vaccinated. The mother nursed the child to the close of the disorder, and none of them suffered any inconvenience from contagion.

I think, in the above stated cases, the evidence adduced must convince the doubting part of the community, and amply testify to the efficacy of cowpox as a substitute for

smallpox. The people in this vicinity have dismissed their doubts which formerly existed, and have full confidence in the virtues of vaccination.

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*On the employment of the Oil of Cod Fish in Scrofulous Diseases.* By M. TAUFFLIED.—[The beneficial influence of the oil of cod fish in certain forms of scrofulous disease, has within the last few years been dwelt on by various German writers; M. Taufflied reports eight cases, from which he draws the following inferences confirmative of their accounts.] 1. The oil of cod fish exercises a favorable influence on the general state of lymphatic subjects. 2. If administered with proper care it possesses the property of curing scrofula of the bones, tabes mesenterica, and scrofulous or rheumatismal chronic arthritis. 3. Caries accompanied with solution of continuity and engorgement of the soft parts requires local treatment in addition to the oil administered internally. Under these circumstances compression and alcoholic iodurretted fomentations may be successfully employed. 4. The oil of cod fish has no efficacy in cases of gouty arthritis, nor does it exercise any influence on the engorgement of any lymphatic glands except the abdominal. It seems to have little or no effect on scrofulous phthisis, if this be at all advanced. 5. The oil should be administered perseveringly and for several months, in order to secure advantageous results.—*Gaz. Medicale de Paris.—Bost. Med. and Surg. Jour.*

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*Treatment of Syphilis.**—M. Ricord has recently made some observations on the treatment of syphilis, in a French journal, of which the following is the substance:

M. Ricord divides the progress of syphilis into three stages or phases. In the first, the action of the virus is completely local; in the second stage, the accidents are confined to the skin, or mucous membranes, and are characterised by the fact that the morbid products are incapable of producing the original disease, or inoculation. The symptoms of the third stage rarely occur bofore the seventh month, and are incapable of being transmitted by hereditary disposition: this is their characteristic mark.

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* Abridged from L'Experience, No. 141; and London Lancet, April 11, 1840, p. 112.

M. Ricord considers the mercurial treatment tc be more frequently injurious than useful in the first stage. On the contrary, mercury is absolutely necessary in the second stage.

Where the tertiary symptoms alone exist, M. Ricord has generally recourse to the ioduret of potassium. He begins with doses of ten grains in the following manner:

Distilled water, 3 ℥;
Ioduret of potassium, 10 grs.;
Syrup of poppies, 1 ℥.

This potion is taken in three doses, during the day, with sarsaparilla, the quantity of the ioduret gradually increased every five days, until the patient takes 100 grains a day.

Whenever secondary symptoms coexist with the tertiary, M. Ricord administers the proto-ioduret of mercury in the dose of a grain, gradually increased to six grains.—*American Med. Lib.*

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*New Treatment of Cancer.**—M. Jobert has endeavored to check the progress of this terrible malady, by tying all the vessels and dividing all the nerves which are distributed to the affected part. His efforts, however, have not been crowned with success.

In four cases of cancer of the lip M. Jobert tied the facial and coronary vessels, and divided the branches of the fifth nerve, which pass to the lip. The ligature of the vessels caused some improvement in the appearance of the ulcers, and on dividing the nerves the pain was removed; but in all cases he was compelled to extirpate the disease, at last.—*Ib.*

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* L'Experience, l. c.; and Lond. Lancet, April 11, 1840, p. 112.

# THE WESTERN JOURNAL.

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## MEDICINE IN PARIS.

We have the pleasure of laying before our readers another letter from our esteemed correspondent, Dr. Linton, giving an account of the state of medicine in the French capital. It will be found interesting, though Dr. L. apologises for not making it so practical as he intends his future communications shall be. He proposes shortly visiting Edinburgh and Dublin, from which points he promises we shall often hear from him. Y.

Paris, May 1, 1840.

*Dear Sir*:—In my last letter, I attempted to afford you a concise account of the organization of medical institutions in Paris, and France generally. I proceed, in the present, to a notice of the actual state of the science—a task to which my limits would prevent me from doing ample justice, not to speak of other and weightier reasons. Since the downfall of Broussaisism, no other exclusive system of medicine has been favored with the general sanction of

the profession. The time seems to have gone by when system-builders may expect the multitude to bow down to their idols, and yield a slavish credence to their dogmas and dreams. The doctrine of comparative equality appears to be obtaining, as well in the scientific, as in the political world, and as the notions of the divine rights of kings are about being forever banished from the latter, the yoke of the authority of great names is almost thrown off by the former.

In medicine, this is unquestionably the result of the great facilities which are now afforded to all, for the study of its various departments. Every one can examine for himself the facts and truths whose logical deductions should constitute the principles of the profession; and is of course in a condition to think and reason, as well as observe for himself; or in other words, to build theories for himself—not airy and speculative hypotheses, but theories, rational theories, which is but another term for cautious inductions, and the truths—the principles, which flow necessarily from them. *Exclusive theory* in medicine, will, I think, be found in every instance to be the offspring of hasty induction or generalizations. The pathologist, for example, finds that irritation is capable of exciting inflammation, and a host of diseases, local and general; and in the ardour of his discoveries, hastens to the conclusion, that all "the ills that flesh is heir to," are thus produced. Another observes, that, in the forms of fever called typhus, the small intestines are the seat of a peculiar species of ulcers; and this fact being observed in a greater or less number of cases, he arrives at the general conclusion, that this lesion is not only an invariable accompaniment of typhus, but the *fons et origo* of the malady.

Hahnemann observed, or is said to have observed, that quinine given to the healthy subject produces intermittent fever; and knowing, that this therapeutic agent is almost a specific in this disease, he concluded, after making other analogous observations, that the best method of curing disease is to administer, in each particular case, the agent capable of producing a *similar* disease. Now, there is *some* truth in this. We know that cold is a therapeutic agent of undoubted power even in the diseases which it produces. What is better for a frozen limb than frictions with snow? The same law, says Hahnemann, holds good in the prevention of disease, which is best effected by substituting the mild for the graver forms; and the

small pox may be cited as an example. Is not the process of acclimation effected in the same way? But Hahnemann went still further. In a state of disease, says he, the organs are far more irritable than in health, and therefore the dose of the agent administered must be greatly diminished. Hence his small, almost infinitesimal doses. Examples of this hasty generalization, or formation of theories, might be multiplied were it necessary. But I only wished to express and illustrate the opinion, that all the exclusive theories which have, from time to time, been presented to the medical public, consist of inductions pushed too far—deductions more or less logical, with a goodly amount of speculation, and that consequently they are not altogether either true or false.

Thousands of diseases are produced by irritation. This no one doubts; though the theory, that all the morbid changes to which the organization is subject are thus produced, may well be questioned or rejected; and thus, though *Broussaisism* may be regarded as fallen, the facts which formed the basis of his too aspiring edifice still stand secure and unmoved.

Though no exclusive system of medicine prevails at present in France, yet it cannot be said, that the science is "in ruins." The observation of facts is going on rapidly; their classification, and the deduction of principles from them is the work of calmness and caution. One class is not permitted, like the rod of Aaron, to swallow up the rest, and thus constitute a huge, though frail, and indefensible body, known by the name of "exclusive theory." The humoral pathology is gaining ground in Paris. You hear almost as much about lesions of the blood, as lesions of the solids—as much about passive congestions and sedatives, as irritations and inflammations; and of sustaining the patient by cordials and stimulants, as of reducing him by the lancet, leeches and gum water. No *exclusive* theory of pathology or therapeutics need be expected again, in France, from the fact, that no such system can be true. The industrious and talented observer may be disposed, occasionally, to push his conclusions farther than the facts warrent; but in such an event, instead of being hailed by the multitude as an extraordinary genius, and of seeing his mental offspring adored as the veritable child of philosophy and truth, hundreds of observers as industrious and gifted as himself will not only refuse their credence to his dogmas, but respond in resistless might, thus far, and no farther, the facts justify

you in going, and here shall thy proud spirit of speculation be stayed."

Thus *Chomel* and *Rostan* watch the movements of *Louis* and *Bouillaud*—thus *Gibert* and *Trousseau* expose the errors of the younger *Broussais* and *Piory*—thus the materialist combats the aërial philosophy of the vitalist; and the rationalist, the uncertainty and unsoundness of the principles of the numerist; whilst the thoughtful Andral regards the whole with unbiased scrutiny. Thus, also, in the department of surgery, the innovations of *Civiale Guerin* and *Leroy d'Etiolles*, are submitted afresh to the crucible of experiment by *Velpeau*, *Roux*, *Sanson*, and a host of others; whilst *Lisfranc*, the fault-finding and unsparing demi-god of French Surgery, pours out upon each new principle, method, and procedure, the vials of relentless criticism. Thus, in short, are the masterspirits of the times engaged in close observation and cautious induction, each ready to expose the hasty generalizations of the others. In such a state of things, he does not understand the signs of the times, who looks for the establishment of an exclusive system. He may look for what is daily taking place—the perfectionment of the many principles or generalizations of the profession; but not for the time when one simple generalization shall constitute the science of medicine.

It is almost unnecessary to say, that all parties agree as to the importance of anatomical studies: Pathological anatomy is cultivated with indefatigable zeal; though it is not to be denied, that something more is necessary in order to cure diseases, than the mere knowledge of the pathological lesions in which they consist; and that a great many of those lesions, though grave enough to produce death, elude the most scrutinizing autopsies. Alterations in the organization, which consist merely in a loss of equilibrium between the solids and fluids, and those especially which affect the nervous centres, though of a serious and sometimes promptly fatal character, are not easily detected in *post mortem* examinations. These considerations have caused many to estimate pathological anatomy beneath its deserts; whilst, on the other hand, its advantages are perhaps overrated by those devoted to its cultivation. It is clear however, that every thing is not to be expected from any one source; and that this department of medical science presents its quota of light to the physician. The *numerists*, at the head of whom may be placed

Bouillaud, regard numbers as the great lever which is to raise medicine to the height of certainty. Fifty cases of typhus, say they, were treated by the lancet, and fifty by purgatives and stimulants: out of the former, forty recovered; out of the latter, but twenty; therefore, the one treatment is superior to the other in the proportion of forty to twenty, or two to one. In short, they rely greatly on statistical tables. Now, who disputes the value of statistics in medicine? No one, I suppose; but, at the same time it is easy to perceive, that they are not infallible, when we consider the great variety presented by the constitutions of patients, and that indeed no two cases of disease are exactly alike.

I had intended, in this letter, as I promised in my last, to give something more practical. I find, however, that I have almost exhausted my paper without having complied with that promise. I will, therefore, conclude by giving you the classification adopted by *Cruveilhier* in his course of pathological anatomy: I transcribe from 'the black board.'

Lesions Morbids.—1st *Divisions.*—2d *Adhesions.*—3d *Displacements.*—4th *Canalization.*—.5th *Hypertrophy.*—6th *Transformations.*—7th *Hypersecretions.*—8th *Hæmorrhagy.*—9th *Inflammation.*—10th *Tubercle.*—11th *Cancers.*

The professor commenced his present course upon the fourth order of his classification, viz: *Canalization*, under which he treats of all the alterations of canals—as of the digestive tube, the excretory ducts, the vascular system, &c., &c. He has been ever since his appointment to this chair engaged with the three foregoing orders, at which rate he will be some years in getting through his entire course. I suppose he intends it to be a *complete* one. In my next, I will endeavor to give a resumé of the lectures of Professor *Trousseau*, on the therapeutic properties of iron. He is regarded as one of the ablest therapeuticians of the capital.

M. L. L.

NATCHEZ TORNADO.

We have seen several short notices of this desolating tempest by gentemen of Natchez, from which we propose imbodying some of the more remarkable facts. According to Dr. Tooley, whose account is the fullest that we have read, the morning of the fatal 7th of May was densely overcast, and very warm, with a brisk south wind which increased about about noon, veering to the east. The southwestern sky at mid-day assumed a darker and more tempestuous aspect, the gloom and turbulence increasing every moment; and by forty-five minutes after 12 the storm began to be distinctly heard, the wind blowing a gale from the north east. The roar of the tempest, which grew louder and more terrific as it advanced rapidly upon the city, was attended with incessant flashes of forked lightning. At 1.45, Dr. Tooley describes the storm-cloud as assuming "an almost pitchy darkness, curling, rushing, roaring above, below, a lurid yellow, dashing upward, and rapidly approaching, striking the Mississippi some six or seven miles below the city, spreading desolation upon each side, the western side, being the centre of the annulus. At this time a blackness of darkness overspread the heavens, and when the annulus approached the city, the wind suddenly veered to the S. E. S, attended with such crashing thunder as shook the solid earth. At 2.10 the tornado burst upon the city, dashing diagonally through it, attended with such murky darkness, roaring and crashing, that the citizens saw not, heard not, knew not the wide wasting destruction around them." The rush of the tornado over the city occupied a space of time not exceeding five minutes, and the destructive blast not more than a few seconds. At this moment the barometer fell according to one writer to nearly 29.

The disastrous effects of the storm are too well known to the readers of the Journal to require a lengthened description. "Natchez under the Hill," with the exception of one or two houses, was razed to the ground, and nearly every private dwelling, and public edifice in the city sustained more or less injury. Hundreds of houses were unroofed, or had their gable ends or windows blown out; of three steamboats at the wharf, two were sunk, and the third, which was freighted with lead, had its upper works blown away to the water's edge; not less than sixty flat boats parted their cables, and

were swamped; and three hundred human beings, it is computed, perished on the land and in the river during the few moments in which the tempest was passing. Few such storms are recorded in the history of the United States, but as hurricanes of destructive violence occur almost every year in some part of the country, it becomes a matter of something more than curious interest to ascertain the laws by which they are governed, and the mode in which they exert their tremendous force. We were informed by Dr. Cartwright, that Dr. Tooley preserved his house from all injury, even the breaking of a pane of glass, by adopting the measures which his theory of storms suggested. That theory was the *explosive* one—that, where houses are demolished by a tornado, it is in consequence of the sudden expansion of the air within, caused by the instantaneous rarefaction of the external atmosphere. Dr. Tooley observed, that as the storm approached the mercury in his barometer sunk rapidly; and he prepared for the expansion of the air in his house by raising all the windows and throwing open the doors. His house was not so well built to resist a storm as many of those in his neighborhood which were prostrated, or sustained more or less damage, and its escape can only be accounted for by the fact, that he provided for the exit of the air which, confined, must have blown out the windows, as happened in many instances, if it had not blown down the house. A wing of Dr. Cartwright's house was blown down, but the main body of it which was of a very substantial structure, escaped with the loss of its chimneys and the bursting out of the windows.

What is the rationale of tornadoes? Is the force exerted owing to the gyratory motion of the atmosphere, or to a sudden rarefaction in some portion of it, causing a corresponding expansion of those portions immediately under it or around it? In many storms there can be no doubt, that the gyrations of the atmosphere do the mischief, as where forest trees are seen twisted off. In other cases the violent sweep of the atmosphere bears down all before it. But in Natchez the wind is said not to have been more violent than the persons who were present had often seen it when no extensive mischief was done; and this tornado, from a multitude of facts collected, seems to have been of the class in which the ruin results from explosions. The following may be cited from a great number:

1. The gardener of Dr. Cartwright had just quit his employ, and

in leaving his house neglected to close the doors and windows. It escaped without injury. The gardener of a friend, living in his immediate neighborhood, hastened when he saw the storm approaching, and succeeded in closing his doors and windows, which he had scarcely done when the house fell upon him and killed him.

2. The garret of a brick house, mentioned in the account of Dr. Tooley, being closely shut up, both ends were bursted outward, and with such explosive force, that some of the bricks of the windward end were thrown upon a terrace nearly on a level with it, to a distance of not less than twenty feet, in the face of the wind.

3. A brick house on the north side of Main street had its leeward gable end blown out, the windward end remaining uninjured.

4. The windward gable end of a large house adjoining the Commercial Bank, bursted outward in the face of the storm, the leeward end escaping without injury.

5. The gable ends of a large three-story brick house on Franklin street were thrown out with great violence, in opposite directions, and one, of course, against the wind.

6. The leeward ends of two brick stores were thrown outward with violence, while the windward ends escaped. The same happened to the leeward side of a large brick house close by.

7. In the neighborhood of the last mentioned, another brick house had the windward gable end thrown outward.

8. The desks in the Agricultural Bank, which were locked by the president as the storm commenced, were found open shortly after, with their locks bursted. In another instance, the drawer of a bureau was thrown quite out, while the bureau itself was found in its previous position.

9. The leeward walls of two front rooms of the Tremont House were thrown outward with great force, without injuring or disturbing the furniture within.

10. The gable ends of a large brick store on Main and Pearl streets, were blown out; the roof of the fire-proof brick office of the Probate Court exploded to windward; and in a house on State street a large trap door in the roof was bursted open, giving an outlet to the air, and saving the roof.

Hundreds of such facts, it is said by persons who have surveyed the ruins, might be adduced, showing, that where sufficient openings were not afforded to the expanding air, the roof, windows, or some

other part of the house gave way, and most generally to the leeward. A writer in one of the Natchez papers pledges himself to point out to the incredulous, in a walk through the city, *five hundred explosions*—instances in which the violence done can only be explained by the outward action of the atmosphere.

We have a parallel case in the *break-bottle* experiment with the air-pump, in which a thin square bottle, hermetically sealed, is shivered into a thousand fragments, under the exhausted receiver, by the expansion of the confined air. The pressure of the atmosphere over the city was suddenly diminished nearly one thirtieth, as was shown by the fall of the barometer, and rooms containing four thousand cubic feet of air, were thus subjected it has been estimated, to a pressure from within of eighty-six tons more than from without. The consequence was, that the windows were blown out when the walls were strong, and the equilibrium was thus restored; and in garrets, where the air was more confined, trap doors were blown open, or gable ends thrown out with immense force. In some cases roofs were heaved up and removed, and often, as has been shown, walls were shot out in the face of the wind. Garrets being closer were oftener exploded than other apartments which were relieved by windows and doors; and for the same reason brick houses sustained more damage than those composed of wood. And, finally, in the "explosive" theory we have an explanation of the well authenticated fact, that where doors and windows were unclosed, leeward and windward, houses, as was strikingly the case with Dr. Tooley's, escaped all injury. Whatever, therefore, may be the *modus operandi* of hurricanes generally, the conclusion seems irresistible, that in the tornado at Natchez the demolition of buildings was occasioned by the rarefaction of the outer atmosphere, and a corresponding expansion of the air within, equalling the explosive force of gunpowder. Still, there are phenomena connected with the the storm for which nothing but the supposition of "a mighty rushing wind" will account; and such a wind, in fact, is inseparable from the rarified state of the air which led to the explosions. Into the air which thus presented a comparative vacuum, the surrounding atmosphere must have rushed with great violence; and it was this wind that uprooted forest trees, raised the immense waves in the Mississippi, and forced the boats from their moorings.

The quantity of rain which fell during the passage of the tornado,

according to Dr. Tooley, was only 83-100 of an inch, but holding in suspension mud and particles of leaves and other vegetable matter in such quantities as not only to darken the air, but leave a thick coating upon whatever it came in contact with.

Dr. Tooley closes his account of the tornado with a description of some curious effects produced by it upon the leaves and buds of plants: they were in a manner *seared* by it. Those which were not killed outright were crisped, and their growth suspended for ten or more days. Some very thriving grape cuttings in the garden of Dr. T. were killed, and the old vines were also stunted and injured. An arbor vitæ in his yard seemed blighted and dying; the leaves of the succulent morus multicaulis appeared for some days as if an eastern sirocco had passed over them; and fruit trees, grass and weeds assumed the same appearance. Y.

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### SICK-HEADACHE.

Dr. Burbell, of New York, in a letter to Dr. Alcott of Boston, says, "Not a case of sick-headache has ever occurred, within my knowledge, except with the drinkers of tea and coffee, and not a case had failed of being cured on the entire renunciation of them."

Is this the experience of physicians generally? If so, the fact ought to be known. The use of tea and coffee is almost universal, and it would probably be difficult to find a subject of sick-headache who was not in the habit of drinking them. But is it true, that entire abstinence from them will prevent or cure it? This is the important question, and if settled in the affirmative will go far to prove, that these drinks are the cause of sick-headache.

A lady of our acquaintance in Tennessee who had been for many years the victim of this malady, enjoys now a comparative exemption from it. Her attacks of the complaint were frequent and exceedingly severe. She ascribes her recovery to the use of the *tincture of Lobelia inflata*, which she took in doses of a teaspoonful, whenever she felt the premonitory symptoms of an attack. This quantity was just sufficient to excite nausea, but not to produce vomiting. The improvement in her health occurred about the 50th year of her age,

and may have been the effect of some change of constitution at that period, rather than of the lobelia. The remedy, however, is worthy of trial in this most common and most troublesome affection. Y.

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SATURATED ALCOHOLIC TINCTURE ON EUPATORIUM PERFOLIATUM.

When in Galliopolis, Ohio, we were informed by Dr. Hibbard, that he is in the habit of treating ague and fever with this tincture. He gives it in teaspoonful doses several times during the intermission. It is intensely bitter, and neither purges, vomits nor sweats the patient. He has not found the decoction to answer the same purpose. He administers a decoction of Aristolochia Sepentaria at the same time. The Doctor assured us, that he had found this treatment successful in a great number of cases; and it might, he thinks, be made to supercede in a great degree the use of the sulphate of Quinine.

D.

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CONGENITAL FUNGUS HÆMATODES.

The first and only case of congenital fungus hæmatodes, or Encephaloid, we have ever seen, fell under our observation, in the vicinity of Athens, Ohio, in a late trip to that town. We were indebted to Drs. Carpenter and Blackstone for the opportunity of seeing it.

The child, a female, was two days old. The disease occupies the whole of the left nates, which is swelled out into a great, shining, globoid tumour; rendered irregular by tuberous elevations. It extends from the perineum, anus and vulva to the sacrum and the spine of the ilium, so as to involve the acetabulum. Its colour is deep red. Many of the cutaneous veins are much enlarged. A portion of the skin had suffered abrasion and considerable hæmorrhage had already occurred. Some parts of the tumour are hard, others soft — the general mass felt hard. It was tender under the hand. In short it had all the diagnostic marks of encephaloid, before fungous growths appear. The child was rather lean but seemed to be in health; and was free from tumors or malformations in any other part. From this case it would appear, that this variety of carcinoma occurs throughout a much more extended period of life

than schirrhus, for we have seen it up to the 50th year — while the latter prevails most in advanced life, is perhaps never congenital and not often a complaint of youth. D.

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MILK-SICKNESS.

When lately at Urbana, Ohio, we collected from Dr. Carter, who has practised medicine in that town for more than a quarter of a century, the following facts, relative to the production of "Milk-Sickness," or "Sick-Stomach." Formerly the disease prevailed much more than within the last 8 or 10 years. This, Doctor C. ascribes to the confinement of cows within enclosed pastures. The neighborhood of Urbana presents, at the surface, two geological varieties: first, a true upland level, clayey, and covered chiefly with white oak, the soil thin, and reposing on a compact, arenaceous, ash-grey limestone: second, a diluvial formation, consisting in extensive, level deposites of rolled pebbles, gravel and sand, covered with black, carbonaceous mould, destitituto of trees and clothed in long grass. Those tracts are evidently the beds of obsolete ponds and little lakes.

As long as cattle feed on the latter, according to the observation of Dr. Carter, the milk-sickness is not produced; when they frequent the woodlands, the disease is apt to occur. But it is not dangerous for them to feed in these natural pastures at *all* seasons of the year. Dr. Carter has never known them nor the people affected before the month of July, and, in most instances, not till August; from which till December is the time of greatest danger. He has never seen a case of the disease in man, that he could not trace up to the cow. Milch cows occasionally die, but on the whole are less liable than cattle which do not give milk. He knows of one tract of woodland three or four miles north-east of Urbana, which has been peculiarly fatal. Nearly all the following facts connect themselves with that spot.

Sixteen or eighteen years ago, a family living near it, had one milch cow, which was suffered to feed upon it. During the first August after their removal thither, and while they were using her milk, the father of the family sickened with the characteristic symptoms and died; and within a week from his death, the wife and two children, experienced the same fate, from attacks of the same kind

A young man living in the family had, at the same time, an attack of dysentery;—suggesting, undoubtedly, that the *gastric* disease which carried *them* off might have arisen from the same cause which produced *his intestinal* complaint. The cow was seized with the "*trembles*," about the time the children were attacked, and died.

In the summer of 1837, in the month of August, the milch cows of Mr. Taylor, were suffered to range for a week in the same wood, during which they were milked as usual. The milk and butter made from it were eaten. A portion was also manufactured into cheese. Four of the family, two adults, and two children, all of whom had used the milk and butter, sickened with the well known symptoms, and one of the former died. The cheese was "thrown to the dogs"—one ate of it and sickened; and some chickens which picked up fragments of it died.

In the month of October 1839, about twenty cattle escaping from their enclosures near this wood, were allowed to graze, or rather to browse, in it for 6 or 7 days, when several of them were found dead on the ground. The remainder were driven home, affected with the *trembles*. Some of them died the first night, and but one of the whole recovered.

Dr. Carter introduced us to Mr. Hitt, an intelligent and respectable farmer, who lives near Urbana, who informed us that he had lost many cattle by this malady; but has never seen it affect any which did not run at large, nor known it occur earlier in the calendar year than August. Two years ago in that month, his cattle ran abroad and one of the finest of them "got the trembles." He kept her from water, fed her on green corn (maize,) and drenched her with lard, as curative means. Finding that she did not improve in health, he determined to give her drink. After taking a few swallows of cold water, she fell down in convulsions, and to put an end to her sufferings he cut her throat. His two dogs ate of her carcase. In two days, one of them stiffened in his limbs "so that he could not jump over a low fence" and died—the other was affected with the same stiffening, but got well. His hogs, also, ate of the carcase, but were uninjured; but at another time, when he lost four cows, his hogs devoured a part of their carcases, and were destroyed.

We give these facts, with the observation that Dr. Carter is a regularly educated physician, and an honest man. D.

## CASES OF PARTIAL PARALYSIS IN CHILDREN.

In the month of June when in Xenia, Ohio, Dr. Templeton afforded us an opportunity of seeing five children affected with partial paralysis. The resemblance to each other, of these cases, and the *simultaneous* occurrence of four of them, induced us to record the following particulars.

*Case* 1.—Mr. Sheppard's son, aged 15 months, generally enjoyed good health, and could walk very well, when a little more than a year old. About the middle of May, he became costive and fretful, and after a few days had decided fever. Three days after the supervention of the latter, palsy of the lower extremeties came on. It was perfect, that is to say, all power of the will over the muscles seemed to be gone, but the sensibility of the skin remained. The arms were unaffected, but the muscles of the trunk of the body were enfeebled, so that he could not sit up. The fever soon ceased. He took calomel and other cathartics. When we saw him, June 30, the right leg was nearly restored—the left remaining almost motionless. His general health appeared perfect. He had no spinal tenderness.

*Case* 2.—Mr. Moore's daughter, aged 20 months, was healthy from her birth, and walked when nine months old. In the latter part of May, she became costive, feverish, and was observed to have a weak and husky voice. She now and then screamed out in sleep, and at the end of a week had one spell of vomiting. Suddenly she lost the power of motion in her lower extremities, which for two days and nights were very cold. Their sensibility remained unimpaired. For three weeks, she could not even crawl nor stand; she then began to use the right limb moderately, and at the time we saw her, the left was moved in a slight degree, when the sole of the foot was tickled. An examination of the spine disclosed nothing. Before the paralysis supervened, a few drops of cathartic medicine were administered.

*Case* 3.—The son of Mr. Charters, 5 years old, was generally in good health, and properly developed both in body and mind, till about the middle of May last, when he was observed to be costive, and complained of headache and sick stomach. A cathartic was administered and he got better; but in a week he was again costive and feverish, with a dry husky cough. Cathartics were again exhibited

and were found to operate very tardily. In a few days it was observed, that when placed on his feet his legs were nearly paralysed, and he seemed to experience pain. Worm medicines, and calomel as a cathartic, were administered freely. No worms were discharged. In a few days he made efforts to walk, when assisted, but turned his toes outward, and dragged his feet. When we saw him, June 30, this debility and dragging still continued, but he was much better. It should be stated, that previously to the attack, his appetite was voracious and that he ate a great deal of meat.

*Case* 4.—A daughter of the same parents, aged 10 months, had been generally in good health up to the middle of May, when she became costive, irritable and feverish. The gums of the middle upper teeth, in front, being tumid and red, were cut. In a few days she partially lost the use of all her limbs, and the movements of her head were greatly weakened. Her voice was feeble and husky, and she had a short, dry, hoarse cough. The debility of her limbs increased; but in a day or two began to abate in all but the left leg and arm, which became nearly motionless. At the time of our examination, she had begun to move her limbs on that side a little—chiefly however by the flexor muscles, the extensors seeming to be entirely paralysed. Dr. Templeton could detect no spinal tenderness. She was treated with cathartic medicines, and was manifestly convalescent when we saw her.

*Case* 5.—Another, 3 years old, was shown to us, who in infancy was healthy, but when she began to use her hands and feet, it was observed that those of the left side were exceedingly inactive and feeble, compared with the others. When 20 months old, she began to walk, but still does it imperfectly—presenting her right side and dragging her left foot, with the toes turned a little out. Her fingers of the left hand are perpetually flexed. She often opens them with her right hand, so as to grasp what she would hold. She cannot protrude her tongue beyond her lower lip. The saliva drivels from her mouth, and in masticating, a portion of the food escapes from its corners, particularly the left, but she has no retraction of the right. She articulates very few words. Her mind is shrewd—her observations acute—her temper irritable—her communication with those around in a great degree pantomimic.

She was never subjected to any medical treatment. The mother

of this child had a brother affected with epilepsy. No other nervous disease in the family.

The occurrence of three of these cases, so much resembling each other in the family of Charters, would seem to indicate a family predisposition; while the occurrence of two cases in his family, one in Shephard's and one in Moore's, nearly at the same time, the whole in one street and within a few squares of one another, would appear equally to indicate a common cause. What that cause might have been, is not known. Dr. Templeton, at first suspected that the children of Charters had been injured with lead, as he worked more or less in paints, and as the constipation, and the paralysis of the extensor muscles, appeared characteristic of the impress of that metal. When two other children, however, in two neighboring houses, were found to labor under the same affection, that theory was relinquished. D.

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MEDICAL MISCELLANY.

Dr. Thomas W. Colescott, of Cincinnati, is engaged in translating the admirable work of *Dr. Civiale*, on *Calculous Affections*, recently published in Paris. The work will be ready for the press early in the winter, and from the ability of Dr. C. there is every reason to believe that the translation will be well executed. It will be comprised in an 8vo. volume of about 500 pages.

*Medical College of St. Louis.*—A medical department has been attached to the Kemper College, of St. Louis, under the charter of that institution. The Faculty has been organized, and consists of the following members: Joseph N. McDowell, M.D., Professor of Anatomy and Surgery; J. W. Hall, M.D., (late of this city,) Professor of the Theory and Practice of Medicine. Hiram M. Prout, M.D., Professor of Materia Medica and Medical Botany. John S. Moore, M.D., Professor of the Institutes of Medicine and Obstetrics. John De Wolf, M.D., Professor of Chemistry and Pharmacy.

The work of Professor Gross, on Pathological Anatomy, has received the commendation of all the leading Journals of the country—a Review of it has been prepared for our next number.

We have received, from Professor Beck, the Transactions of the Medical Society of the State of New York, for 1839 and 1840, which we shall notice in an early number. Y.